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Portfolio of Doctorate in Health Psychology

Exploring the impact of clients' disclosures of trauma on psychologists working in the National Health service: a qualitative study

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For the qualification of Professional Doctorate in Health Psychology

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Acknowledgements

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Declaration

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Editorial Style

The contents of this portfolio employ the editorial style of the American Psychological Association as detailed in the Publication Manual of the American Psychological Association (6th edition).

Abbreviations

AMED	Allied and Complementary Medicine
BACP	British Association for Counselling and Psychotherapy
BDI	Beck Depression Inventory
BMI	Body Mass Index
BO	Burnout
CF	Compassion Fatigue
CFST	Compassion Fatigue Self-Test
CI	Confidence Interval
CS	Compassion Satisfaction
CT	Controlled Trial
CBT	Cognitive Behavioural Therapy
CBT-AD	Cognitive Behavioural Therapy for adherence and depression
CPD	Continuing Professional Development
CVD	Cardiovascular Disease
CSDT	Constructivist Self-Development Theory
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CENTRAL	Cochrane Central Register of Controlled Trials
DSM	Diagnostic and Statistical Manual of Mental Disorders
ECAT	Ealing Crisis and Assessment Treatment
EPIC	European Prospective into Cancer and Nutrition
EPHPP	Effective Public Health Practice Project
EMBASE	Excerpta Medica Database
FBG	Fasting Blood Glucose
GP	General Practitioner
HBM	Health Belief Model
HMIC	Health Management Information Consortium
HbA1c	Glycated Haemoglobin
ICD	International Classification of Diseases
IDF	International Diabetes Federation
IPA	Interpretative Phenomenological Analysis
ITT	Intention-to-Treat

JSS	Job Satisfaction Survey
kCal	Kilocalorie
kg	Kilogram
LDL	Low-Density Lipoprotein
m^2	Square Meter
mg	Milligram
MBI	Maslach Burnout Inventory
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
PTSD	Post-Traumatic Stress Disorder
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
Pro-QOL	Professional Quality of Life Scale
RCT	Randomised Controlled Trial
SAMHSA	Substance Abuse and Mental Health Services Administration
SD	Standard Deviation
STS	Secondary Traumatic Stress
STSS	Secondary Traumatic Stress Scale
T2D	Type 2 Diabetes
TABS	Trauma Attachment Belief Scale
TSIBS	Traumatic Stress Institute Belief Scale
TTM	Transtheoretical Model
UK	United Kingdom
USA	United States of America
VT	Vicarious Traumatisation
VT-ORG	Vicarious Trauma Organisational Readiness Guide
VTS	Vicarious Trauma Scale
WHO	World Health Organization
WLMHT	West London Mental Health NHS Trust

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Toumpanakis, A., Turnbull, T., & Alba-Barba, I. (2018). The effectiveness of plant-based diets in promoting well-being in the management of Type 2 diabetes: a systematic review. *BMJ Open Diabetes Research and Care*, *6*(1), doi: 10.1136/bmjdrc-2018-000534.

Section A: Preface

PREFACE

This portfolio is a documentation of how the required competencies for the Professional Doctorate in Health Psychology degree at City, University of London were met. It includes examples of how Health Psychology frameworks and approaches were incorporated and implemented during my academic and clinical work as a trainee health psychologist. The individual competencies that are included in the present portfolio are: (1) research; (2) generic professional practice; (3) consultancy; (4) behaviour change intervention; and (5) teaching and training.

The research thesis explores the phenomenon of vicarious traumatisation among psychologists in the British National Health Service (NHS) and is entitled '*Exploring the impact of clients' disclosures of trauma on psychologists working in the National Health Service: a qualitative study*'. More specifically, the present thesis tries to highlight and clarify the impact of clients' exposure to traumatic events on psychologists' well-being in the course of their work.

The internationally peer-reviewed *British Medical Journal Open Diabetes Research and Care* published the systematic review that is included in this portfolio about the role of plant-based diets in managing diabetes. In addition, the publication of the study attracted the attention of several media (e.g. American Broadcasting Company, Columbia Broadcasting System, National Broadcasting Company) and universities (e.g. King's College London, New York University, Rush University Medical Center, University of Exeter, University of Glasgow, University of Toronto). A second article that explores the phenomenon of burnout among mental health professionals is going to be submitted for publication to the *International Journal of Clinical and Health Psychology*.

Through my placement at the Psychology Department of the West London Mental Health (WLMHT) NHS Trust I developed my psychological, evaluation and research skills as well as my critical thinking and interpretations of results. I was involved with different teams and managed to work with many different populations that greatly expanded my experience and knowledge. I was directly involved in psychological assessments, formulations, treatment plans and interventions as well as their delivery to service users. In addition, I was directly involved in the treatment plans of clients with complex psychological and physical health issues. That provided me with the skills to adopt a more spherical and holistic approach as a healthcare professional as my approach was focused not only to the psychological symptoms of the person but also to any comorbid physical issues. A consultancy was designed and delivered for a community-based mental health organisation and aimed to raise psychological awareness to both service users and staff. In addition, a cognitive behavioural therapy (CBT) intervention was tailored and implemented to adults with depression comorbid with Type 2 diabetes (T2D) at WLMHT. For the training aspect of the doctorate, I designed and delivered a seven-hour workshop titled '*Living with learning disabilities and schizophrenia*' to Westminster Society's staff. The aim of the workshop was to raise psychological awareness among the staff and cause behavioural change in practice. For the teaching purposes two lectures were planned and delivered: one to the Master of Science Health Psychology students of City, University of London which focused on the '*Impact of screening*'; and the second one was delivered to the medical students of Imperial College London. This lecture was provided on a monthly basis and addressed the role of psychologists and psychological therapies in the NHS.

Through the Professional Doctorate in Health Psychology training I was enabled to better understand and utilise frameworks and theories of health psychology in order to facilitate behavioural change in individuals. The doctoral training helped me to grow not only professionally, but personally as well. I learnt to be independent in organising my time and work. Furthermore, I learnt to be a dependable colleague and team member, and very responsible with regard to patient care. My future plan is to pursue a role working within the NHS, to raise psychological awareness and reduce types of inequalities in healthcare.

Section B: Research

Exploring the impact of clients' disclosures of trauma on psychologists working in the National Health Service: a qualitative study

ABSTRACT

Objective: Given the identified gaps and inconsistencies in the literature the current study: (1) uses the conceptualisation of VT to investigate and highlight the potential effects of exposure to clients' traumatic disclosures on psychologists working in the NHS, (2) employs a qualitative methodology for an in-depth exploration of participants' experiences and (3) recruits a relatively homogeneous sample to improve the accuracy and quality of the resultant data.

Methods: Nine qualified psychologists with working experience in the NHS were recruited through snowball sampling and personal networks. Qualitative data was collected using semi-structured interviews. Interviews were audio recorder, transcribed and analysed using Interpretative Phenomenological Analysis (IPA).

Results: Two superordinate themes emerged entitled *'The impact of clients' traumatic disclosures on the psychologist'* and *'Dealing with clients' traumatic disclosures in the National Health Service context'*. The first superordinate theme produced 4 subordinate themes entitled *'Psychological and physical reactions'*, *'Questioning belief systems'*, *'Social and relational impact'* and *'Coping mechanisms'*. The second superordinate theme produced six subordinate themes entitled *'Job expectations'*, *'Support systems'*, *'Caseload'*, *'Sense of safety'*, *'Culture influence'* and *'Considerations of improving systems'*. The participants had experienced vicarious trauma symptoms such as disruptions in their cognitive schemas, nightmares, intrusive thoughts and images, alterations in their sense of safety for themselves and significant others, changes in their worldviews and loss of trust.

Conclusions: The participants reported symptoms that suggest the presence of VT. They mentioned cognitive disruptions and alterations of their beliefs, sense of safety, worldviews, trust towards others, job satisfaction and, sometimes, motivation, among others. In addition, participants reported organisational environment challenges such as heavy caseloads, lack of cultural awareness, decreased sense of safety at work, unmet job expectations, lack of space and time for reflection and a general lack of specialised support within organisations.

1.0 INTRODUCTION

1.0.1 Rationale for present study

The author of this study undertook his training placement in the mental health services of West London Mental Health National Health Service (NHS) Trust, where he undertook supervised work with individuals who had experienced trauma in their lifetimes (e.g. war, torture, sexual abuse) and was exposed to distressing disclosures, graphic details and, in a number of cases, photographs. As a result, the author developed an interest in the field of trauma and began to investigate and study it further in order to be better equipped to work with survivors of trauma. He came across research that suggested that professionals who work with trauma survivors and are exposed to detailed traumatic accounts can experience symptoms of trauma (Webb, 2015; van der Kolk, 2014; Figley, 2002; Pearlman & Saakvitne, 1995). Research proposes a number of different constructs for work-related trauma: vicarious traumatisation (VT) (McCann & Pearlman, 1990), compassion fatigue (CF) (Figley, 1995; Stamm, 1995), secondary traumatic stress (STS) (Figley, 1995) and post-traumatic stress disorder (PTSD) (American Psychiatric Association [APA], 2013). The present study will analytically and critically explore VT as it offers a full theoretical framework for understanding and assessing the effects of traumatic disclosures on professionals.

The reasons for conducting this research are (1) a gap in VT literature, (2) the identified inconsistencies in VT research and (3) an increase in the number of trauma cases making up NHS psychologists' caseloads as a result of a rise in individuals experiencing at least one traumatic event and the underfunding of NHS mental health services. It is predicted that the research results will provide valuable insight into VT and its potential impact on professionals exposed to repeated traumatic disclosures. In addition, the findings will further assist professionals to increase their awareness about the consequences of trauma work.

1.1 What is trauma?

1.1.1 Defining trauma

The word trauma originates from the Greek verb *τιτρώσκω* (titrosko), which means to injure and, in its passive form, being wounded at physical and/or psychological level (Schimmenti, 2017; Berger, 2015). Trauma is not clearly defined and its meanings include psychological and physical injury as well as the incident that caused this injury (Brend, 2014; Courtois & Ford, 2009). While physical trauma might co-occur with psychological trauma, and often cause it, the focus of this study will be on psychological trauma.

The term trauma has been used interchangeably in literature to outline (1) the event that occurred, (2) the experience of the individual during exposure to the event and (3) the individual's reactions to this experience, whether peritraumatic (occurring during and/or in the immediate aftermath of the event) or post-traumatic (occurring weeks, months or years after the event) (Berger, 2015; Courtois & Ford, 2009). For example, the American Psychological Association (2020) describes trauma as an emotional response to a terrible event, like an accident, rape or natural disaster, that has the following characteristics: (1) immediately after the traumatic event, shock and denial are typically experienced by the individual and (2) the individual's longer-term responses include unpredictable emotions, flashbacks, strained relationships and physical symptoms, such as nausea and headaches. Notably, this definition does not refer to 'events' but rather to 'event', which excludes traumatic experiences like long-term childhood abuse and neglect or continuous domestic violence. In addition, other types of traumatic experiences, such as collective trauma, intergenerational trauma or systemic abuse, are overlooked by this definition (Brend, 2014). Horowitz (1989), meanwhile, described trauma in a broader way, as a sudden and forceful event that incapacitates a person's ability to respond to it, while contradicting one's worldview and disabling one's ability to cope. He added that trauma does not need to include an actual physical harm in order to occur. In a more inclusive definition, the Substance Abuse and Mental Health Services Administration (SAMHSA) (2014a) refers to trauma as the result of an event, a series of events or a set of circumstances experienced by an individual as physically or emotionally harmful or threatening and which has lasting adverse effects on the person's functioning and emotional, physical, social and/or spiritual well-being.

Traumatic events can be the result of exposure to a threatening incident or series of incidents during which the individual faces actual or threatened death, sexual violence or serious injury (Kleber, 2019; World Health Organization [WHO], 2018; APA, 2013). They can be caused by nature (e.g. avalanche, hurricane, pandemic, earthquake) or by humans (e.g. terror attack, sexual assault and abuse, torture, physical abuse) (Kessler et al., 2017; SAMHSA, 2014b). Trauma caused by human action can be either intentional (e.g. rape) or unintentional (e.g. car accident), and an individual's response to the trauma often depends on its intentionality. A traumatic experience can challenge an individual's worldview, perception of safety for self and others, beliefs and spirituality as their reality has been shaken and violated (Tedeschi & Moore, 2016; Pearlman, Wortman, Feuer, Farber, & Rando, 2014; SAMHSA, 2014b). However, the severity of an individual's reaction to a specific traumatic event is difficult to determine, as trauma is a multi-faceted experience and includes personal, social, political and cultural factors. Trauma is a deeply subjective and complicated experience and it is, therefore, difficult to define it with objective criteria (Black & Flynn, 2020; Briere & Scott, 2015; Brend, 2014). For example, a particular incident might be perceived as traumatic by one person and not traumatic by another (e.g. a war refugee might experience leaving their homeland differently from another refugee) (Tedeschi & Moore, 2016; SAMHSA, 2014a).

Indirect repeated trauma exposure could cause similar symptomatology to direct trauma exposure (Berger, 2015; APA, 2013). However, McNally (2009) argues that a person should be physically present at the scene of trauma to qualify as a trauma survivor and that indirect exposure should thus not be considered as traumatic. Although necessary as a starting basis, objectively defined trauma is not sufficient to determine which individuals experience trauma (Boals, 2018). It is of utmost importance to take into account the experiences and interpretations of those who have lived through the event in order to enrich trauma understanding and further develop its definition.

1.1.2 Effects of single and repeated trauma on physical and mental health

Single-incident trauma has been conceptualised as a one-time, sudden blow following an unanticipated event (e.g. a terrorist attack, a single episode of physical abuse or a natural disaster) and is often described as 'type I trauma'. By contrast, 'type II trauma', or complex trauma, refers to long-standing repeated exposure to extreme external events (e.g. domestic violence, war, ongoing abuse) (Sage, Brooks, & Greenberg, 2017; Negele, Kaufhold, Kallenbach, & Leuzinger-Bohleber, 2015; SAMHSA, 2014b; Courtois & Ford, 2009; Terr, 1991). The focus of this study will be on indirect repeated traumatic exposure.

Trauma can impact a person in multiple ways. Following a traumatic event, individuals can experience physical/somatic symptoms, including heart palpitations, nausea, headaches, numbness and fatigue, as well as psychological responses, such as anxiety, depression, anger, fear, loneliness, hopelessness and sadness (Tedeschi & Moore, 2016; Briere, Scott, & Jones, 2015). Additionally, people who have suffered from trauma often exhibit behavioural problems, including withdrawal, impulsiveness, aggression, alcohol or drug abuse and changes in sleeping patterns (Tedeschi & Moore, 2016; Briere et al., 2015). Adverse responses to traumatic events may continue for several weeks, leading to the development of PTSD, which in turn increases the risks of depression, anxiety, substance abuse, neurological disease, hypertension, cardiovascular and pulmonary disease, arthritis, lung disease, chronic pain and endocrine disorders, among others (Remch, Laskaris, Flory, Mora-McLaughlin, & Morabia, 2018; Briere et al., 2015; Abouzeid, Kelsall, Forbes, Sim, & Creamer, 2012; Phifer et al., 2011; Spitzer et al., 2009; Bedi & Arora, 2007; Dobie et al., 2004; Frayne et al., 2004).

Type II/complex trauma usually occurs in childhood and is associated with repeated, chronic and severe traumatic events, most of the time of an interpersonal nature (e.g. child abuse, domestic violence) (Briere et al., 2015; Briere & Spinazzola, 2009; van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005). Repeated traumatic exposure can alter or disrupt one’s social development, core elements of self, and psychological and neurobiological development (Berger, 2015; van der Kolk, 2014; Courtois & Ford, 2009). Victims of chronic violence have been associated with higher healthcare utilisation, lower overall physical health status and higher healthcare costs (Briere et al., 2015; Glaesmer, Braehler, Riedel-Heller, Freyberger, & Kuwert, 2011; Haskell et al., 2011; Frayne et al., 2004). Moreover, research suggests the association between repeated trauma and mental health conditions like depression (Negele et al., 2015; Carvalho-Fernando et al., 2014), anxiety (Ayazi, Lien, Eide, Swartz, & Hauff, 2014), psychosis (Schafer & Fisher, 2011; Shevlin, Dorahy, & Adamson, 2007), eating disorders (Guillaume et al., 2016; Tagay, Schlottbohm, Reyes-Rodriguez, Repic, & Senf, 2014), personality disorders (Giourou et al., 2018; Swart, Wildschut, Draijer, Langeland, & Smit, 2017) and self-harming behaviours (Asgeirsdottir et al., 2018; Howard, Karatzias, Power, & Mahoney, 2016). Chronic trauma exposure has also been correlated with sexual dysfunction, substance abuse, gastrointestinal disorders, chronic pelvic pain, musculoskeletal disorders and neurological disorders (Briere et al., 2015; Pilver, Levy, Libby, & Deasai, 2011; Liebschutz et al., 2007; Campbell, 2002). In his book on how trauma impacts the brain, mind and body, van der Kolk (2014) states that people who have experienced chronic trauma have been found to respond differently to direct eye gaze than individuals with no history of trauma exposure (Steuwe et al., 2012). Research has shown that survivors of chronic trauma react with intense activation of periaqueductal gray, the anatomic and functional interface between the forebrain and the lower brainstem that plays an important part in integrated behavioural reactions to internal or external stressors (e.g. pain, threat) (Benarroch, 2012; Steuwe et al., 2012). As a result, individuals who have experienced chronic trauma respond to direct eye gaze with defensive behaviours, such as hypervigilance, exaggerated startle, escape and cowering (van der Kolk, 2014; Steuwe et al., 2012). As social interactions depend deeply on mutual eye-to-eye contact, which allows people to acknowledge the emotions and intentions of others, repeated traumatic exposure can pose a significant hurdle for individuals in forming and developing social relationships (Steuwe et al., 2012; Tomasello & Carpenter, 2007).

Nevertheless, despite the various negative effects of single and repeated trauma exposure, a number of trauma survivors have reported positive transformation and post-traumatic growth (Killian, Hernandez-Wolfe, Engstrom, & Gangsei, 2017; Tedeschi & Moore, 2016). Some individuals demonstrate an increased level of self-reliance once they realise that they are able to successfully overcome an extreme situation (Tedeschi & Moore, 2016). Survivors of trauma have also reported positive transformations in life philosophy, improved relationships with family and friends, positive spiritual development, discovery of personal strength and new understanding of life’s purpose and meaning (Tedeschi & Moore, 2016; Lambert & Lawson, 2013; Samios, Abel, & Rodzik, 2013; Hernandez, Engstrom, & Gangsei, 2010). As with the negative effects of trauma exposure, post-traumatic growth is a subjective phenomenon – different people have different experiences of positive transformation.

1.1.3 Indirect traumatic exposure at work

Professionals who work in people-oriented jobs (e.g. psychologists, nurses, doctors) form therapeutic relationships with their clients that require an intense and exceptional level of emotional empathetic contact. Although these relationships can be satisfying and rewarding for the professional, they can also be stressful and exhausting (Maslach & Leiter, 2016). Individuals repeatedly exposed to indirect trauma as part of their work – by listening to clients' traumatic disclosures or handling dead bodies, for example – are more susceptible to symptoms of trauma (APA, 2013). Research suggests that healthcare staff experience a considerable amount of work-related indirect trauma (Pirelli, Formon, & Maloney, 2020; Wines, Hyatt-Burkhart, & Coppock, 2019; Sendler, Rutkowska, & Makara-Studzinska, 2016). The risks of working with traumatised individuals have been supported by studies on social workers (Joubert, Hocking, & Hampson, 2013), lawyers (Maguire & Byrne, 2017), emergency workers (Setti, Lourel, & Argentero, 2016), support workers (Bishop & Schmidt, 2011), nurses (Raunick, Lindell, Morris, & Backman, 2015), medical doctors (Woolhouse, Brown, & Thind, 2012) and mental health professionals (Finklestein, Stein, Greene, Bronstein, & Solomon, 2015). However, several other studies suggest that working with traumatised individuals does not have a significant negative impact on professionals (Mishori, Mujawar, & Ravi, 2014; Jenkins, Mitchell, Baird, Whitfield, & Meyer, 2011), and others even report positive effects (Masson, 2019; Michalchuk & Martin, 2019). For example, Michalchuk and Martin (2019) found that psychologists who were indirectly exposed to clients' traumatic disclosures reported growth, optimism, hopefulness and positive transformation as a result of witnessing clients' resiliency. However, the focus of the study was the exploration of positive effects of trauma work; thus, any negative impacts were not explored in depth.

In the last three decades, work-related trauma has become a fertile ground of research and has been studied and conceptualised in different ways. The terms assigned to work-related trauma are STS (Figley, 1995), CF (Stamm, 2010; 1995; Figley, 1995), PTSD (APA, 2013) and VT (McCann & Pearlman, 1990). Burnout (BO) (Maslach, 1982) is often mistakenly thought to be a trauma-related concept because it shares some similar aspects and symptomatology with CF, STS, PTSD and VT.

1.2 Exploring the trauma-related and similar concepts that professionals can experience at work

This section will explore the trauma-related (CF, STS, PTSD, VT) and similar (BO) constructs that can affect professionals working with traumatised individuals. The aim of this section is to assist the reader in understanding what each term entails and how they relate to VT, which is the focus of this study.

1.2.1 Exploring the vicarious traumatisation construct

1.2.1.1 The foundational framework of the vicarious traumatisation concept: The constructivist self-development theory

VT is conceptualised as the cumulative, unique and negative transformations in healthcare professionals resulting from exposure to the traumatic disclosures of their clients and from empathic engagement with them (Pearlman & Saakvitne, 1995; McCann & Pearlman, 1990). In order to better understand the concept of VT, the constructivist self-development theory (CSDT) will be discussed first.

The concept of VT originated in 1990 when McCann and Pearlman (1990) noticed that therapists working with survivors of childhood trauma were affected on multiple levels (e.g. cognitive, emotional, somatic) by the traumatic disclosures of their clients. The foundational theoretical framework used to describe the construct of VT was the CSDT (McCann, Sakheim, & Abrahamson, 1988). Although it was initially developed as a theoretical basis for understanding the effects of direct trauma exposure on individuals, the CSDT was later applied as a framework to explore and understand the impact of trauma work on therapists (Brend, 2014; Pearlman & Caringi, 2009; Pearlman & Saakvitne, 1995). It represents an integrative amalgamation of psychoanalytic theories (object relations, self-psychology), cognitive developmental theory, constructivist thinking and social learning theories, and seeks to address, emphasise and explore adaptation and meaning-making in the wake of traumatic experiences (Lee, 2017; Brent, 2014; Moulden & Firestone, 2007; Rasmussen, 2005; Kadambi & Ennis, 2004). The theory suggests that trauma is a unique individual experience and, therefore, rejects stage-focused treatments as these do not take into account the uniqueness of each person’s traumatic responses and processes (Lee, 2017; Brend, 2014). Furthermore, it proposes that people construct their own personal realities while interacting with their environment and that they interpret and make sense of life experiences through the development of cognitive schemas (Cohen & Collens, 2013; Williams, Helm, & Clemens, 2012; Saakvitne & Pearlman, 1996; McCann & Pearlman, 1990). More specifically, the CSDT suggests that the self is formed of five interrelated components: (1) frame of reference, (2) self-capacities, (3) ego resources, (4) memory system and (5) psychological needs and cognitive schemas (Pearlman, 2013; Saakvitne & Pearlman, 1996; Pearlman and Saakvitne, 1995).

Frame of reference refers to an individual’s contextual understanding of the world they live in and of themselves within this world, whereas memory system refers to the verbal, visual, affective, somatic and interpersonal memory that encompasses an individual’s perceptions and experiences of the world (Pearlman et al., 2014; Pearlman & Saakvitne, 1995). The abilities that allow an individual to navigate within the intrapersonal world and maintain inner balance are termed self-capacities (Pearlman et al., 2014). In contrast, ego resources refer to the abilities and mechanisms that allow for navigation of the interpersonal world (e.g. making decisions, foreseeing consequences) (Lee, 2017; Pearlman et al., 2014; Saakvitne & Pearlman, 1996). The CSDT framework proposes that an individual’s behaviours are influenced and motivated by their needs for safety, esteem, trust, control and intimacy (Saakvitne & Pearlman, 1996; McCann & Pearlman, 1990). Cognitive schemas are expressions of these needs and can be defined as the beliefs, expectations and assumptions about the world and self, developed through cumulative experiences, through which people organise their life experiences (Lee, 2017; Miller, Flores, & Pitcher, 2010; Saakvitne, Tennen, & Affleck, 1998). They can become disrupted when new incoming information is incompatible with the existing belief system, resulting in a disrupted perception of the world (Cohen & Collens, 2013).

The CSDT focuses primarily on cognitive alterations and their consequences rather than on emotional responses. Emotions are mostly utilised as means for exploring and interpreting the cognitive responses and/or transformations of affected individuals; they are not explored separately in depth. For example, the feeling of shame, which is commonly associated with domestic violence, is viewed as a meaning-making construction of trauma survivors that protects their sense of control and power (e.g. ‘I must deserve this because I am bad’.) (Saakvitne & Pearlman, 1996). The CSDT perceives cognitive, behavioural and emotional effects and transformations as interlinked; however, it places focus on the cognitive element and does not offer a further, in-depth examination of the emotional aspect of experienced trauma. Dunkley and Whelan (2006) also suggest another limitation of the CSDT: that it does not differentiate between disruptions in cognitive schemas and increased levels of awareness. For example, a psychologist who works with survivors of child abuse and sees a parent talking loudly to their child might jump to the conclusion that the parent will become physically aggressive towards the child. Instead of being seen as a demonstration of the psychologist’s disrupted cognitive schemas, this reaction could be interpreted as an increased alertness of child abuse that results from trauma-related work. Steed and Downing (1998) suggest that cognitive disruptions could be re-conceptualised and explored on a continuum that ranges from awareness to exaggeration.

Research proposes that exposure to the traumatic disclosures of clients can disrupt the cognitive schemas of professionals as well as the beliefs that shape their view of, and give meaning to, their world (Lee, 2017; Sui & Padmanabhanunni, 2016; Hunter, 2012; Marmaras, Lee, Siegel, & Reich, 2003). Healthcare professionals exposed to the traumatic disclosures of their clients actively restructure their reality based on the interaction between their own frame of reference and their clients' traumatic experiences (Williams et al., 2012; Pearlman & Saakvitne, 1995). Several studies support the CSDT's theoretical framework and its consistency in relation to professionals experiencing disruptions in their cognitive beliefs as a result of their exposure to client trauma (Long, 2020; Middleton & Potter, 2015; Branson, Weigand, & Keller, 2014; Jankoski, 2010). For example, a study by Long (2020) found that medical advocates who work with rape survivors reported an increased sense of vulnerability, decreased feelings of safety and negative effects on their daily activities. The results indicate that a number of participants experienced changes in their cognitive schemas, particularly those associated with safety, control and trust. However, some argue that the CSDT fails to explain VT comprehensively (Mairean & Turliuc, 2013; Williams et al., 2012). For example, in their study on the presence of VT among medical staff, Mairean and Turliuc (2013) could not confirm the cumulative aspect of the CSDT as longer working service was correlated with decreased disruption in beliefs. However, the participants of this study had a considerable working experience (M = 12.84 years), suggesting that the findings might be associated with the development of self-care strategies over the years of service; thus, the cumulative aspect of the CSDT could have been moderated. Dunkley and Whelan (2006), meanwhile, suggest that the CSDT fails to recognise the full range of effects of working with trauma survivors (e.g. potential positive changes). Studies have found that professionals exposed to client trauma experienced positive changes in their daily living, worldviews, frames of reference, self-capacities and psychological needs (Beck, Rivera, & Gable, 2017; Manning-Jones, de Terte, & Stephens, 2016; Hyatt-Burkhart, 2014). Research also suggests that negative changes to frames of reference are mainly associated with professionals working with domestic and/or sexual abuse survivors (Long, 2020; Possick et al., 2015; Pistorius, Feinauer, Harper, Stahmann, & Miller, 2008; Iliffe & Steed, 2000), indicating that working with specific types of trauma might affect specific cognitive schemas in individuals. The co-existence of both negative and positive changes in cognitive schemas supports the view that the self is a multi-layered construct – some elements can be accommodated negatively, some positively and some can be adapted (Leeming, 2014; Pack, 2013). Empirical evidence suggests a need for the CSDT conceptualisation to be expanded to include the broad range of potential positive effects of trauma exposure.

For several years, the CSDT remained conceptually stable and unchanged. It was only after the 2000s that research expanded the framework to include somatic and brain reactions as potential effects of trauma exposure (Pearlman et al., 2014; Pearlman & Caringi, 2009). Elements of attachment theory (e.g. attachment styles) have also been incorporated to offer further understanding and exploration of the work-related effects of indirect trauma exposure (Merhav, Lawental, & Peled-Avram, 2018; Pearlman & Courtois, 2005; Marmaras et al., 2003). Despite its limitations, the CSDT offers a solid theoretical framework for understanding VT, as it suggests aetiology and treatment possibilities. In addition, rather than pathologising normal responses to traumatic events, it adopts an approach to symptoms that values and respects their adaptive qualities and individuals' trauma experiences (Pearlman et al., 2014; Pearlman & Caringi, 2009).

1.2.1.2 Definition and characteristics of vicarious traumatisation

VT is a specific term which refers to the cumulative negative transformations experienced by healthcare professionals as a result of indirect exposure to client trauma, which often includes graphic and detailed traumatic disclosures (Sui & Padmanabhanunni, 2016; Possick et al., 2015). It has been defined as 'the transformation of the therapist's inner experience as a result of empathic engagement with survivor clients and their traumatic material' (Saakvitne & Pearlman, 1996, p. 25; McCann & Pearlman, 1990, p. 31). VT symptoms can affect the individual in different life dimensions (e.g. personal, social, occupational) and can be classified as negative changes of cognitive schemas, intrusive thoughts and images, or avoidance and arousal (Branson, 2019; Aparicio, Michalopoulos, & Unick, 2013). Negative changes have the potential to be cognitive (Sui & Padmanabhanunni, 2016; Hernandez-Wolfe, Killian, Engstrom, & Gangsei, 2015; Barrington & Shakespeare-Finch, 2014), mental (Possick et al., 2015; Jankoski, 2010), physical (Sui & Padmanabhanunni, 2016; Morran, 2008; Pistorius et al., 2008), spiritual (Barrington & Shakespeare-Finch, 2014) or sexual (Long, 2020; Branson et al., 2014; Killian, 2008). Other reported VT effects include changes in worldviews, changes in personal values, disconnection from loved ones, lack of trust, loss of self-esteem, loss of personal identity, professional shame, increased cynicism, disrupted beliefs about oneself, fear within one's home, hopelessness, intrusive thoughts, intrusive images, nightmares, disrupted sleeping patterns, detachment, startle responses, diminished libido, flashbacks, anxiety, depression, anger, rage, sadness, irritability, avoidance, tiredness, hypervigilance, exhaustion and absenteeism from work (Long, 2020; Wines et al., 2019; Dombo & Blome, 2016; Sui & Padmanabhanunni, 2016; Hernandez-Wolfe et al., 2015; Possick et al., 2015; Barrington & Shakespeare-Finch, 2014; Jankoski, 2010; Killian, 2008; Morran, 2008; Pistorius et al., 2008; Benatar, 2000).

VT can impair professional functioning and trauma workers need to be self-reflective and attuned to how they respond to traumatic disclosures from clients to avoid compromising the therapeutic relationship and quality of care. Professionals experiencing VT may show a lack of motivation and energy, poor decision making and difficulty maintaining professional boundaries or responding to client needs, highlighting the need to address the ethical implications of VT (Branson, 2019; Iqbal, 2015; Pearlman et al., 2014; Williams et al., 2012; Trippany, White-Kress, & Wilcoxon, 2004). Empathy is an essential tool for therapists to build and maintain a therapeutic rapport with their clients and offer them a safe environment (Hunter, 2012; Splevins, Cohen, Joseph, Murray, & Bowley, 2010). The therapist's empathetic engagement with clients involves exposure to their personal traumatic experiences and requires the therapist to maintain their objectivity, be aware of their biases and remain non-judgemental. By adapting to the client's perspective of the world, the therapist is able to comprehend the experienced traumatic event, resulting in a deeper intimate connection that can leave therapists susceptible to being affected by their client's trauma (Pirelli et al., 2020; Andahazy, 2019; Aparicio et al., 2013). Increased levels of empathy in therapeutic relationships often result in empathy depletion and are associated with poorer mental health outcomes for both therapist and client (Figley, 2002). As a result of the empathetic relationship between therapist and client, some authors view VT as an occupational hazard and an inescapable natural consequence of working therapeutically with survivors of trauma (Branson, 2019; Foreman, 2018; Middleton & Potter, 2015; Howlett & Collins, 2014; Furlonger & Taylor, 2013; Coles & Mudaly, 2010). Thus, it should be considered as a research catalyst for future training opportunities, organisational policies, preventive strategies and trauma-informed education (Long, 2020; Butler, Carello, & Maguin, 2016; Munger, Savage, & Panosky, 2015). However, other authors argue that describing VT as hazardous or inescapable is categorical and they suggest that VT symptoms can be ameliorated or prevented with the adaptation of specific strategies (Cummings, Singer, Hisaka, & Benuto, 2018; Peled-Avram, 2017; Clemans, 2005; Trippany et al., 2004). In a study focusing on victim advocates, Cummings et al. (2018) suggested that the creation of prevention programmes focusing on work-related satisfaction as a means to decrease VT should be considered. Similarly, Peled-Avram (2017) suggests that adaptation of prevention strategies, such as vicarious trauma-informed training, group supervision and balanced caseload, might be beneficial for social workers who work with traumatised clients.

1.2.1.3 Vicarious traumatisation protective and risk factors

There is a lack of consensus in the literature regarding what constitutes protective and risk factors for the development of VT. Inconsistent results have been reported regarding the role of a professional's history of trauma in the development of VT. Empirical evidence supports the notion that personal trauma history serves as a VT risk factor and predictor and that it makes professionals vulnerable to client trauma, triggering certain emotions and responses (e.g. countertransference) that might undermine and affect the therapeutic alliance (Merhav et al., 2018; Peled-Avram, 2017; Shannon, Simmelink-McCleary, Im, Becher, & Crook-Lyon, 2014; Williams et al., 2012; Adams & Riggs, 2008). Jenkins et al. (2011) investigated the impact of indirect trauma in 101 domestic and sexual assault counsellors and argued that repeated exposure to client trauma similar to their own might provoke intrusive thoughts and images for professionals. In contrast, other findings suggest no association between personal trauma history and VT (Newman, Eason, & Kinghorn, 2019; Bober & Regehr, 2006; Kadambi & Truscott, 2004). Newman et al. (2019), for example, reported weak associations between the two in a study exploring VT among 135 individuals working in correctional and forensic mental health services in Australia. The participants' indirect trauma exposure symptoms at work were assessed using the Impact of Event Scale-Revised (IES-R) (Weiss & Marmar, 1997), which they were asked to complete with reference to their indirect exposure at work rather than any previously experienced traumatic event. However, it is possible that some of their responses related to their personal trauma history rather than to their work exposure, subsequently affecting the results (e.g. participants might have assimilated their personal trauma and, therefore, reported minimal effects). The IES-R scale was initially designed to assess symptoms of direct trauma exposure as opposed to VT and it is perhaps not sensitive to the symptomatology of indirect trauma. In addition, the personal trauma of participants was not assessed (e.g. type of trauma, length of exposure, ways of coping), making it difficult to determine its effect on participants' working life. Adding to the mixed results, several other studies showed that personal trauma history can generate motivation, resilience, growth and positive outcomes (Long, 2020; Williams et al., 2012; Jenkins et al., 2011; Linley & Joseph, 2007). The literature review did not find a pattern regarding how the personal trauma history of participants is assessed, which might offer an explanation for the inconclusive results. The different outcomes of the studies might be due to the various methods used to obtain information on participants' trauma history. In concordance, Branson (2019) suggests that the complexity of trauma (e.g. chronic trauma, episodic trauma) adds to the difficulty in developing appropriate research designs to assess personal trauma history. For example, Williams et al. (2012) used a 28-item self-report scale (Childhood Trauma Questionnaire), while Michalopoulos and Aparicio (2012) measured it with a single yes/no question.

Other important factors that emerged during the literature review due to their correlation with VT were age, years of experience, gender, repeated exposure to traumatic disclosures, caseload, trauma-informed training and supervision. Way et al. (2007) reported that younger sexual abuse treatment clinicians presented greater disruptions in self-intimacy. Similarly, further research recognised the role of age as a risk factor (Halevi & Idisis, 2017; Finklestein et al., 2015). In contrast to these findings, other studies reported no correlation between age and VT symptomatology (Chouliara, Hutchison, & Karatzias, 2009; Van Hook et al., 2009; Bride, 2004). Bride (2004) suggests that there is some evidence that younger professionals might be more at risk compared to older ones, but this might be associated more with the development of coping strategies that comes with increased experience and less with age. Moreover, there is a general agreement in literature that lack of experience is a VT risk factor as newly qualified professionals might be unprepared to face the overwhelming nature of working with survivors of trauma (Newman et al., 2019; Michalopoulos & Aparicio, 2012; Culver, McKinney, & Paradise, 2011). It is important to recognise, however, that the more experienced professionals might have additional responsibilities and supervisory duties and that the more complex cases are likely to be assigned to them (Branson, 2019), resulting in additional traumatic exposure and in further stress as a result of increased work demands and limited time for self-care strategies (Branson et al., 2014; Shepard, 2013). Mairean and Turliuc (2013) argue that increased experience is associated with decreased levels of VT, a finding inconsistent with the notion that VT is a cumulative reaction. A potential explanation for this result might be that, over time, experienced professionals were able to employ protective coping and self-care mechanisms that enabled them to build resilience and personal growth, which in turn helped them better manage the effects of their clients' trauma and report decreased VT levels (Branson, 2019; Ben-Porat, 2015; Silveira & Boyer, 2015). Literature suggests that focusing on resilience and personal growth when faced with client trauma is important to enable experienced professionals to remain in the field of trauma work for longer periods of time (Sansbury, Graves, & Scott, 2015; Shepard, 2013).

According to the literature review, gender yielded a level of consistency among empirical evidence as a VT risk factor. Specifically, female professionals seem to be at more risk for VT development (Baum, Rahav, & Sharon, 2014; Cohen & Collens, 2013; Tabor, 2011; Jaffe, Crooks, Dunford-Jackson, & Town, 2003). However, these findings may be the result of predominantly or exclusively female samples in the majority of VT studies (e.g. Bolic, 2019; Cummings et al., 2018; Foreman, 2018; Merhav et al., 2018; Middleton & Potter, 2015; Howlett & Collins, 2014). Contrary to this observation, Maguire and Byrne (2017) reported no evidence of correlation between gender and VT. This finding could be attributed to the sample's heterogeneity (participants' occupational backgrounds varied greatly: 36 lawyers, 21 psychologists and nine social workers) as well as its gender-biased nature (53 females and 13 males).

Repeated exposure to clients' traumatic data causes a cumulative effect and potentially overwhelming emotions in professionals, making them vulnerable to VT symptoms (Kiyimba & O'Reilly, 2015; Coles & Mudaly, 2010). A number of studies suggest that high levels of exposure to client trauma are correlated with high levels of VT and can disrupt an individual's frame of reference and cognitive schemas (Foreman, 2018; Molnar et al., 2017; Chouliara et al., 2009; Van Hook et al., 2009). Additional research findings proposed that negative cognitive transformations related to self were predominantly reported by professionals working with survivors of domestic and/or sexual abuse (Cohen & Collens, 2013; Pistorius et., 2008; Iliffe & Steed, 2000). In contrast, Brockhouse, Msetfi, Cohen, and Joseph (2011) reported that higher levels of cumulative trauma exposure predicted higher levels of personal growth in professionals. However, a suggestion for this finding might be that Brockhouse et al. (2011) assessed trauma exposure via an unvalidated method that offered only quantitative and not qualitative assessments of trauma exposure, meaning that the type, complexity and severity of trauma that professionals were exposed to was not assessed. Effectively assessing the type and amount of exposure to client trauma is a multidimensional and difficult task for researchers as a number of aspects need to be considered and synthesised. These include length of career, types of services the professionals have worked with and duration of stay, hours per week/month worked with trauma clients, types of trauma experienced by clients and interventions utilised (e.g. one-on-one therapy, group therapy).

In regard to caseloads, the emerged results show that professionals who have heavy caseloads are more likely to develop VT symptomatology (Ashley-Binge, 2019; Finklestein et al., 2015; Furlonger & Taylor, 2013; Williams et al., 2012). Numerous studies also underline the importance of professionals having balanced and diversified caseloads to either prevent or mitigate the effects of VT (Dombo & Blome, 2016; Cohen & Collens, 2013; Best Resource Centre, 2012; Tabor, 2011; Voss-Horrell, Holohan, Didion, & Vance, 2011). In some instances, professionals were able to redistribute and balance their caseloads (Baird, 2003), but this often does not lie within the power of the professionals but rather of the organisations/services they work for. Notably, Ireland and Huxley (2018) suggest that professionals often fail to report experienced negative impacts as a result of heavy caseloads because they feel that they are insufficient in their job and not suited to work in the field of trauma. Thus, it is suggested that organisations need to establish an emotionally supportive and consistently respectful working environment in order for staff to feel more comfortable reporting the emerged difficulties and VT effects that they experience as a result of working with trauma survivors (Pirelli et al., 2020; Quitangon, 2019; Isobel & Angus-Leppan, 2018; Lee, 2017; Sansbury et al., 2015). Aiming to offer assistance to organisations, Hallinan, Shiyko, Volpe, and Molnar (2019) developed the Vicarious Trauma Organisational Readiness Guide (VT-ORG), which can be used to assess the readiness of an organisation to identify, address and respond to VT. This study was the first time that the VT-ORG had been employed and additional research is, therefore, needed to establish its reliability and validity.

Trauma-informed training could instigate VT awareness and act as a protective factor by enabling professionals to normalise their VT responses (Andahazy, 2019; Isobel & Angus-Leppan, 2018; Berger & Quiros, 2014). Literature suggests the need for more such trainings, which are often recommended to organisations as proactive strategies (Foreman, 2018; Sansbury et al., 2015; Culver et al., 2011; Adams & Riggs, 2008; Lonergan, O’Halloran, & Crane, 2004). Nevertheless, several authors suggest caution and propose that VT education and training programmes run the risk of creating VT for professionals who would otherwise be unaware of it (Branson, 2019). Shannon et al. (2014) found that some social work students reported feeling overwhelmed when they learnt about the potential for VT in those working with trauma survivors and started to question their career decisions. Contrastingly, Isobel and Angus-Leppan (2018) argue that VT awareness is crucial for both treatment efficacy and well-being of staff as it promotes transparency, reflection and self-care mechanisms. Trauma-informed approach refers to a renewed awareness of the need for organisations and professionals to be aware of trauma (e.g. different types, appropriate therapies, assessments) and to deliver care in a way that is sensitive to its effects and implications, including the effects of VT on professionals (Isobel & Angus-Leppan, 2018). However, Bercier and Maynard (2015) argue that this type of prevention training has not yet been fully established as a protective factor and that its implementation might significantly raise the expenses for organisations, with subsequent budget cuts in other domains. Cosden, Sanford, Koch, and Lepore (2016) reported that trauma-informed training could increase professionals' skills and understanding of client trauma, but might not be sufficient for them to manage the symptoms of VT. Addressing this, other authors suggest that trauma-informed training should not only focus on the awareness of client trauma assessment, treatment and care, but also on the potential challenges and effects that might emerge for professionals who work with trauma survivors (Isobel & Angus-Leppan, 2018; Molnar et al., 2017).

According to the literature review, supervision serves as a significant protective factor against the development of VT (Middleton & Potter, 2015; Howlett & Collins, 2014; Barrington & Shakespeare-Finch, 2014). Through supervision, professionals can develop awareness of their internal responses to clients' traumatic disclosures, awareness of the potential negative effects of working with survivors of trauma and coping strategies (e.g. personal therapy, boundaries between personal and professional life, outdoor activities, meditation) (Tabor, 2011; Newell & MacNeil, 2010; Harrison & Westwood, 2009; Adams & Riggs, 2008; Dunkley & Whelan, 2006). Nevertheless, other studies could either not establish an association between supervision and decreased VT symptoms (Furlonger & Taylor, 2013; Williams et al., 2012) or reported the emergence of negative feelings (Wang, Strosky, & Fletes, 2014; Taylor & Furlonger, 2011). Taylor and Furlonger (2011) reported that, at times, professionals might feel professionally exposed to VT and refuse to engage in, or even attend, supervision. This reluctance might be associated with feelings of shame and incompetence in relation to their work with their clients and, as a result, professionals may perceive supervision as an unsafe environment in which to share personal difficulties emerging in their work (van

Minnen & Keijsers, 2000). Branson (2019) states that supervision is not always available to professionals on a regular basis due to short-staffed services and the often multiple service roles of supervisors, which create time restrictions and raise availability issues. This is of particular concern in the United Kingdom (UK) as, in recent years, its NHS mental health services have been dealing with considerable budget cuts that have led to staff shortages in key positions (e.g. consultant psychologists, consultant psychiatrists) (Royal College of Psychiatrists, 2018; Unison, 2016).

1.2.1.4 Vicarious traumatisation research design and assessment scales limitations

The VT literature review identified limitations regarding the design and methodology of studies. For example, the majority of the reviewed quantitative and qualitative studies were cross-sectional, making it difficult to address the aetiology of VT and determine cause and effect. Cross-sectional designs are a one-time measurement of exposure and outcome, which creates limitations for the analysis of long-term behavioural patterns (Singh-Setia, 2016; Marks & Yardley, 2003). Potential changes in cognitive schemas happen over time and cannot, therefore, be effectively captured by cross-sectional studies. This mirrors one of the most common recommendations in the reviewed VT research, which is the need for longitudinal studies to investigate VT (Bolic, 2019; Foreman, 2018; Finklestein et al., 2015; Middleton & Potter, 2015). Barrington and Shakespeare-Finch's (2014) study was the only identified research that used a longitudinal qualitative method; it investigated the effects of indirect trauma exposure in clinicians and administrators working with survivors of torture across a one-year period. The findings showed that participants initially experienced negative VT effects (e.g. disruptions in their beliefs about their self and the world), but that they later reported decreased negative symptoms and increased positive changes (e.g. positive life philosophies, improved interpersonal relationships). However, the sample was relatively small (12 participants from different working backgrounds with different levels and types of indirect exposure – clinicians and administrators) and the term clinician was ill-described; thus, the results should be interpreted with caution.

An additional limitation that emerged is the misuse of psychometric tools used to assess VT, affecting the interpretation of research results and designs. Branson et al. (2014) operationalised VT as a research variable while exploring the relationship between sexual desire and VT responses among mental health and substance abuse professionals, but assessed it using only the Secondary Traumatic Stress Scale (STSS). Similarly, Argentero and Setti (2011) and Wies and Coy (2013) used the STSS as the sole measuring tool to assess VT among emergency workers and sexual assault nurses, respectively. The STSS (Bride, Robinson, Yegidis, & Figley, 2004) is a 17-item scale that was specifically designed to assess STS symptoms consistent with the PTSD criteria set by the fourth version of the Diagnostic and Statistical Manual of Mental Disorders (DSM) (APA, 1994). The utilisation of the STSS alone to assess VT fails to recognise the pivotal role of cognitive transformations, which is the overarching framework of VT. In another study, Munger et al. (2015) used the terms VT and STS interchangeably and utilised the Professional Quality of Life Scale (ProQOL) (Stamm, 2010) to assess VT in correctional health nurses. However, the ProQOL is an assessment tool specifically designed to measure STS, BO and compassion satisfaction (CS), not VT.

The Traumatic Stress Institute Belief Scale (TSIBS) (Pearlman & Mac Ian, 1995) is an 80-item tool consistent with the CSDT framework that uses a 6-point Likert scale to measure the degree of disruption in cognitive schemas of respondents with a history of trauma exposure. Although Pearlman and Mac Ian (1995) provided support for the internal consistency of the TSIBS, they did not provide normative data. A later revision of the TSIBS, the Trauma Attachment Belief Scale (TABS) (Pearlman, 2003), is an 84-item psychometric instrument that assesses the long-term effects of trauma exposure on cognitive schemas. Research suggests that the TABS has strong construct validity and internal consistency reliability (Ashraf & Nassar, 2018; Benuto, Singer, Cummings & Ahrendt, 2018); however, some authors report less support for convergent, factor and discriminant validity (Molnar et al., 2017). Although the TSIBS and the TABS were designed to assess the effects of direct traumatisation, both have been used in numerous studies to assess VT (Uziel, Meyerson, Giryes, & Eli, 2019; Bolic, 2019; Merhav et al., 2018; Peled-Avram, 2017). The items of the TABS are phrased to assess direct trauma exposure (e.g. ‘I can keep myself safe.’), which creates complexities to control for the experience of being directly exposed to a traumatic event when assessing VT. For example, professionals with personal trauma history might face challenges in distinguishing this experience from their vicarious exposure to client trauma, which could influence their responses and subsequently taint study results. However, Pearlman (2003) suggests that the cognitive changes assessed by the TABS are strongly associated with the after-effects of trauma, whether experienced directly or vicariously.

Developed by Vrklevski and Franklin (2008), the Vicarious Trauma Scale (VTS) is the only psychometric tool available today that specifically targets VT. It uses seven items rated on a 7-point Likert scale to assess the subjective levels of distress associated with working with trauma survivors. The VTS was originally validated using a sample of 100 lawyers in Australia and demonstrated adequate internal reliability (Vrklevski & Franklin, 2008); however, there has been limited assessment of its dimensionality. Aparicio et al. (2013) used the VTS to assess VT among 157 social workers in the United States of America (USA) and found moderate VT symptoms. They reported that evidence for the VTS's internal consistency, reliability and validity could not be established and that it should, therefore, be considered a general screening tool and a basis for discussion and further exploration. A validated assessment tool that covers the full range of VT effects is not yet available, and a suggestion for future research would be the design of a psychometric tool to assess the full spectrum of VT symptoms and their intensity.

1.2.2 Post-traumatic stress disorder construct

The DSM and the International Classification of Diseases (ICD) are diagnostic tools published by the APA and WHO, respectively. PTSD was recognised as a mental health condition for the first time in 1980 when it was included in the third version of the DSM (DSM-III) (APA, 1980). Twelve years later, it was also included in the tenth volume of the ICD (ICD-10) (WHO, 1992). Both recognise individuals' pathological trauma based on specific symptomatology: the occurrence of a traumatic event, prolonged and persistent reliving of the traumatic event, persistent avoidance of stimuli associated with the traumatic event, hypervigilance and emotional numbing (WHO, 2018; APA, 2013). This model sees external symptomatology as evidence of an underlying condition and is known as the medical/psychiatric model (McCormack & Adams, 2015; Joseph, 2012).

The definition and criteria of PTSD have been subjected to several revisions and modifications since its inclusion in the DSM and the ICD. In the latest edition of the DSM, the DSM-5 (APA, 2013), PTSD has been moved from the category of anxiety disorders to a new classification of disorders named 'trauma and stressor-related disorders'. Research argues that the empirical evidence for such a change is weak and underlines the risk of shifting PTSD focus away from the sense of danger that results from persistent anxiety and fear responses to trauma exposure (Zoellner, Pruitt, Farach, & Jun, 2014; Zoellner, Rothbaum, & Feeny, 2011).

Furthermore, this re-classification might cause a healthcare professional to consider a PTSD diagnosis for a client exposed to trauma rather than another condition usually associated with responses to trauma (Zoellner, Bedard-Gilligan, Jun, Marks, & Garcia, 2013). In contrast, other studies conclude that the PTSD construct should not be viewed as predominantly associated with anxiety and fear but should expand its context to include a multifold of other emotional reactions (e.g. shame, guilt, anger) (Pai, Suris, & North, 2017; Stein et al., 2014; Resick & Miller, 2009). Thus, the re-classification outside of the anxiety disorders spectrum in the DSM-5 is supported and reflects the acknowledgement that trauma should be perceived as an aetiology rather than a common phenomenology (Friedman, Resick, Bryant, & Brewin, 2011). In the ICD-10, PTSD falls under the category of 'reaction to severe stress and adjustment disorders', a sub-category of 'neurotic, stress-related and somatoform disorders' (WHO, 2019). Contrary to the DSM, the ICD-10 has undergone minimal revisions and its definitions have remained almost identical for the last 27 years. Currently, the WHO is working on the ICD-11, which will come into effect on 1 January 2022 and will include an updated definition of PTSD. The ICD-11 remains out of the scope of the present study as it has not officially come into effect. The current ICD-10 Version: 2019 (WHO, 2018) conceptualises the traumatic event as an uncommon experience that is of an 'exceptionally threatening or catastrophic nature' and is 'likely to cause pervasive distress in almost anyone' (WHO, 2018, p. 120) despite empirical evidence that traumatic events are common in people's lives (Kessler et al., 2017; Kilpatrick et al., 2013). Research suggests that the current description of PTSD in the ICD-10 is outdated and incomprehensive (Greenberg, Brooks, & Dunn, 2015; Maercker et al., 2013).

The ICD-10's solitary change over the course of 27 years is the removal of fear as a required response to a traumatic event or its re-enactments (WHO, 2018). Similarly, the DSM-5 removed intense fear, horror and helplessness responses from its criteria as it recognised the subjective nature of responses to traumatic events (APA, 2013). Several authors welcomed these changes, highlighting the need to separate subjective reactions to trauma from the definition of trauma exposure to avoid conceptual errors and reach construct clarity (Pai et al., 2017; North, Suris, Smith, & King, 2016; North, Suris, Davis, & Smith, 2009). However, the avoidance cluster symptoms outlined in the DSM load high onto a fear factor and create a fear-based response (APA, 2013; Forbes et al., 2010). In addition, in the DSM-5's newly introduced criterion 'alterations in cognitions and mood', fear and horror are re-instated as potential negative symptoms (North et al., 2016; APA, 2013), suggesting that the medical model considers fear/horror responses to trauma significant for a PTSD diagnosis. Research supports this view and suggests that emphasis on fear-based responses might minimise PTSD diagnoses in individuals who do not avoid reminders of the traumatic event and help improve the diagnostic specificity of the condition (Zoellner et al., 2014; 2013). The Classical Conditioning Theory suggests that fear responses are associated with stimuli experienced during the traumatic event (VanElzakker, Dahlgren, Davis, Dubois, & Shin, 2014). As a consequence, stimuli similar to those present during the traumatic experience can trigger emotional distress and are actively avoided (VanElzakker et al., 2014). However, other studies argue that the inclusion of fear/horror in PTSD criteria fails to take into account individuals who react to trauma in a calm manner but still develop PTSD symptoms (Greenberg et al., 2015). The level of danger experienced during a traumatic event depends on individuals' subjective understanding of the situation, which impacts their responses and their odds of developing PTSD (National Institute for Health and Care Excellence [NICE], 2005). Moreover, further research suggests that PTSD can be characterised less by pathological fear and more by anxious rumination and/or anhedonia (Friedman et al., 2011; Resick & Miller, 2009).

The DSM-5 increased the number of PTSD symptom categories from three to four – intrusion, persistent avoidance, negative alterations in cognitions and mood, and alterations in arousal and reactivity – and the overall number of symptoms from seventeen to twenty (APA, 2013). There is a noticeable overlap between the symptomatology of PTSD and that of VT; however, the symptoms of VT are not associated with a precipitating event as professionals are not directly victimised by witnessing the traumatic event first-hand. In addition, they are not exposed to disclosures of traumatic events from close family members or friends as professional ethics and boundaries dictate that close acquaintances should be referred to other professionals for treatment (Branson, 2019). It could be argued that the last qualifying criterion of category A (on what constitutes a traumatic exposure) covers the concept of VT as it refers to professionals who experience the aftermath of a traumatic event as part of their job (e.g. police personnel). More specifically, criterion A4 states that 'experiencing repeated or extreme exposure to aversive details of the traumatic event(s)' (APA, 2013, p. 271) is one way in which individuals can be exposed to trauma. However, criterion A4 is specific to work-related exposure and does not apply to traumatic exposure through television, movies, electronic media or pictures (APA, 2013). Although this addition is an attempt to include the impact of indirect trauma on professionals, it is also considered vague and open to various interpretations because of its ambiguous language (North et al., 2016; Brend, 2014; Zoellner et al., 2013). Brend (2014) states that although criterion A4 refers to repeated indirect exposure, it is unclear if this means the repeated exposure of a single traumatic event or the repeated exposure of several traumatic events over the course of years. North et al. (2016) argue that the DSM-5 describes the experience of a traumatic event as an incident that involves physical altercations. This generates internal inconsistencies for the inclusion of indirect exposure to trauma through others' experiences. Zoellner et al. (2013) highlight the confusing language concerning what constitutes indirect exposure and consider whether psychologists who work with trauma survivors and are repeatedly exposed to traumatic disclosures satisfy criterion A4. An additional question emerges as to how a professional can be exposed to 'actual or threatened death, serious injury, or sexual violence' (APA, 2013, p. 271) through indirect exposure to a traumatic event that has already taken place. Nevertheless, despite the constructive criticism regarding category A, the inclusion of professionals' indirect exposure to trauma through their work is an important addition supported by empirical evidence and a first step towards its more detailed conceptualisation (May & Wisco, 2016; Brend 2014). However, confusing or imprecise definitions of traumatic exposure should be refined in future editions to avoid construct errors and overdiagnosis or misdiagnosis of PTSD (Pai et al., 2017; Zoellner et al., 2013).

Contrary to the ICD-10, which does not provide a specific latency period for the onset of PTSD (WHO, 2018), the DSM-5 specifies that the duration of disturbance must be more than one month in order for a diagnosis to be considered (APA, 2013). Professionals need to carefully and thoroughly assess pre-trauma functioning to determine if the dysfunction emerged before or after the traumatic event took place (Zoellner et al., 2013). For a PTSD diagnosis, the experienced symptoms must cause significant impairment of an individual's daily functioning (e.g. personal relationships, social activities, occupational engagement) not attributed to substance use or another medical condition (APA, 2013), significant dysfunction in a person's life, and be more than merely unpleasant (Greenberg et al., 2015). In contrast, VT does not require significant dysfunction in an individual's life in order to be identified.

Since its conception, the construct of PTSD has generated scientific debates about its distinction from other conditions (Flory & Yehuda, 2015; Zoellner et al., 2014; 2013), its trauma criteria (McNally, 2012; 2009; Weathers & Keane, 2007), the role of symptoms in defining its psychopathology (Nemeroff et al., 2013; Friedman et al., 2011), the need to revise its symptom clusters (Lee et al., 2019; Armour et al., 2015) and its validity (Lee et al., 2019; Zoellner et al., 2013; North et al., 2009). However, these discussions and studies help the scientific community to move forward, further build its understanding and explore complex phenomena, such as PTSD.

1.2.3 Compassion fatigue and secondary traumatic stress constructs

Originally, Figley (1995) suggested that STS referred to the natural and consequential behaviours and emotions that derive from the knowledge that a significant other has experienced a traumatic event and the stress resulting from the will to help the traumatised person. He described symptoms similar to PTSD, including nightmares, hypervigilance, difficulties in concentrating, irritability, intrusive thoughts and images, avoidance of reminders and cues, decreased interest and participation in activities, and feelings of detachment (Figley, 2012; 2002; 1995). Figley used PTSD criteria as a template and suggested that if STS symptoms persist for more than 30 days, STS evolves into a disorder he termed secondary traumatic stress disorder (Figley, 2002; 1995). Notably, he did not offer any explanation or evidence for this evolution or for the number of days suggested (Brend, 2014). He further explained that although STS was the most accurate term to describe the observed indirect work-related trauma, he would instead substitute it with the less stigmatising and less derogatory term CF (Figley, 2012; 1995; Joinson, 1992). STS/CF, as conceptualised by Figley, focuses mainly on the pathological aspects of indirect exposure to another person’s trauma and is not associated with resulting cognitive disruptions (Quitangon, 2019), whereas VT as a result of client trauma exposure is believed to specifically transform one’s cognitive schemas, worldviews and belief systems (Bride, 2012). According to Figley (1995), BO is somewhat associated with STS/CF as both share common symptomatology (e.g. irritability, sleeping difficulties, inability to concentrate). He differentiates STS/CF and BO, however, stating that STS/CF can emerge suddenly but that BO is a gradual process resulting from emotional exhaustion. Moreover, STS/CF has a rapid onset of symptoms compared to BO, is accompanied by a sense of helplessness, confusion and isolation, and has a faster recovery rate (Figley, 1995). However, these claims are not supported by research, highlighting the absence of an empirical base for Figley’s STS/CF construct (Sprang, Ford, Kerig, & Bride, 2019; Elwood, Mott, Lohr, & Galovski, 2011). In order to assess both STS/CF and BO and assist professionals to differentiate between the two concepts, Figley designed and developed the Compassion Fatigue Self-Test assessment scale, which initially consisted of 40 items and showed ample evidence of internal consistency (Molnar et al., 2017). Although Figley suggested ranges for the two subscales of the CFST, he did not describe how the ranges were selected (Elwood et al., 2011).

Parallel to Figley, Stamm (1999) incorporated and further developed the terms CF and STS in her work. She agreed with Figley that STS and BO shared some commonalities but disagreed that STS could evolve to a disorder. According to Stamm (1999), indirect trauma exposure is a complex phenomenon that could lead to a number of different results, such as complex PTSD, depression, substance abuse, somatic reactions and dissociation. She recognised, however, that STS could be an outcome of indirect trauma exposure and, over the following years, developed her own model to address the impact of work on professionals in the helping professions. Stamm (2010) named the model Professional Quality of Life and described this as the quality one feels in relation to their work in a helping profession. Professional Quality of Life incorporates two dimensions: the positive effects dimension that includes CS – this refers to the pleasure that a person receives from their work and is an original concept developed by Stamm – and the negative effects dimension that includes CF (Stamm, 2010). Contrary to Figley, who saw STS and CF as one and the same and as pathological in nature, Stamm separates the two terms and perceives CF as a descriptive concept that addresses the quality of someone’s experience. CF is used as a broad term that refers to the general negative aspect of the helping professions and consists of two elements. The first is BO, which is associated with feelings of hopelessness and difficulties in carrying out or dealing effectively with one’s job (Stamm, 2010). She acknowledges that BO has a gradual onset and is associated with an unsupportive working environment and/or a high caseload. Stamm (2010) defines BO as a two-factor construct, which is different to its more popular three-factor conceptualisation by Maslach (1982). The second element of CF is STS, which refers to the pathological negative effects (e.g. fear, avoidance) resulting from indirect exposure to people who have experienced at least one traumatic event (Stamm, 2010). Sprang et al. (2019), however, argue that Stamm’s CF definition is broad and a more trauma-specific definition of STS is needed. They suggested that a trauma-specific definition of STS will potentially facilitate clinical and research efforts to clearly differentiate STS from other similar constructs. Furthermore, they mentioned that compassion is not necessarily experienced by stress reactions related to indirect exposure to traumatic accounts as more empirical evidence is needed to establish that connection (Sprang et al., 2019). Stamm (2010) developed a validated 30-item psychometric scale to assess her proposed model, the ProQOL, which is available for free from http://proqol.org. However, some authors argue that the ProQOL’s construct validity evidence has not been reported in peer-reviewed studies and underline the lack of independent verification to the claim of measurement rigour (Sprang et al., 2019; Watts & Robertson, 2015). Others report supporting evidence for the construct validity of CS but unsatisfactory evidence for BO and STS (Heritage, Rees, & Hegney, 2018).

Stamm (2010) considers STS and VT to be related as both refer to the experience of a person exposed to the traumatic material of others. Their difference is that VT is the cumulative result of repeated exposure, while the onset of STS is rapid and potentially sudden. Branson (2019) agrees with Stamm on the cumulative effect of VT and the sudden onset of STS. She suggests that VT is associated with professionals who explore and understand trauma through the worldviews of their clients and the meanings attributed to the traumatic event, whereas STS more suitably describes professionals’ shock and awe responses to client trauma (Branson, 2019). Some researchers view VT and STS as the same phenomenon, with a focus on cognitive transformation in addition to the typical trauma symptoms (Bride, 2012), while others see them as separate constructs and suggest that VT is the cumulative result of many STS events (Mathieu, 2012). There is a lack of consensus in the literature on terminology, which needs to be acknowledged to avoid confusion and ensure that the correct symptoms and incidence rates are being researched, outlined and reported. The conceptualisation of CF currently accepted is the one defined by Stamm’s work as her ProQOL is recognised as an accepted and well-used model. It has been utilised in over 660 studies and is the most commonly used psychometric scale for assessing CF and professionals’ quality of life (Molnar et al., 2017; Stamm, 2016; Brend, 2014).

1.2.4 Burnout concept

Although BO is not a trauma-related construct, it is included in this section as it is often mistaken for one because it shares some common characteristics with the aforementioned trauma-related concepts and frequently appears in studies alongside them (Hazen et al., 2020; Waegemakers-Schiff & Lane, 2019; Cummings et al., 2018; Setti et al., 2016).

BO has been widely studied since its introduction in the 1970s by Freudenberger (1974), a clinical psychologist, and Maslach (1976), a social psychologist. Freudenberger (1974) used the term burnout to describe his personal and colleagues’ experiences of psychological stress, loss of motivation, loss of commitment and emotional depletion while working with individuals with substance misuse difficulties. Maslach (1976) was conducting research on the emotional stress and arousal of professionals in healthcare and human services when she discovered that the professionals' coping techniques had significant implications on their work-related behaviours and identities. Specifically, when some of the participants referred to the experienced emotional stress as burnout, Maslach's focus and interest shifted to studying and describing this phenomenon (Maslach, 2015; 1976). She describes BO as a psychological syndrome that emerges as a cumulative reaction to chronic interpersonal job-related stressors (Maslach & Leiter, 2016; Maslach, 2015). This prolonged reaction is specific to work context and is defined by three core dimensions: overwhelming exhaustion, feelings of cynicism and detachment from the job, and a sense of ineffectiveness and lack of accomplishment (decreased professional efficacy) (Maslach & Leiter, 2016; Maslach, 2015; Maslach, Schaufeli, & Leiter, 2001). Two of the three BO dimensions, cynicism and decreased professional efficacy, describe transformations in cognitive, behavioural and emotional aspects similar to those seen in VT. However, BO and VT are considered conceptually different as cognitive disruptions associated with VT are wider in scope, whereas the effects of BO are limited to working conditions (Quitangon, 2019; Bianchi, Truchot, Laurent, Brisson, & Schonfeld, 2014). Furthermore, unlike VT, BO is not specific to professionals who work with trauma survivors (Quitangon, 2019). Although they are two distinct constructs with their own frameworks and psychometric assessment tools, they share some common aspects (e.g. both are cumulative) and occasionally overlap and co-exist.

BO can cause physiological/somatic and psychological symptoms, including sleep disturbances, gastrointestinal disorders, hypertension, chest pain, nausea, chronic fatigue, anxiety and depression (Maslach & Leiter, 2016; Benight & Cieslak, 2013). In terms of outcomes, decreased job satisfaction, absenteeism, intention to quit job, turnover and low organisational commitment have been associated with BO (Maslach & Leiter, 2016). However, studies have reported various findings on the role of job satisfaction in BO; some reported an association (Kumar, Sinha, & Dutu, 2012; Kumar, Fischer, Robinson, Hatcher, & Bhagat, 2007), while others reported no relationship between the two (Prosser et al., 1996).

Maslach developed a 22-item psychometric tool, the Maslach Burnout Inventory (MBI), to specifically assess the three dimensions of the BO model. It was later renamed MBI-Human Service Survey as it was intended for healthcare and social service professionals (Maslach, Jackson, & Leiter, 1996; Maslach & Jackson, 1981). Several versions of the MBI exist to assess BO in different professionals, for example, the MBI-Educator’s Survey for educators and the MBI-General Survey for general professionals (Schaufeli, Leiter, Maslach & Jackson, 1996; Maslach, 1982). The MBI is considered to be the optimum assessment tool for measuring BO and has been the most used in studies exploring the BO phenomenon (Bianchi et al., 2014). However, it has been criticised for how its items are worded (Demerouti Bakker, Nachreiner, & Schaufeli, 2001), for its questionable validity (Wheeler, Vassar, Worley, & Barnes, 2011; Worley, Vassar, Wheeler, & Barnes, 2008; Kalliath, O’Driscoll, Gillespie, & Bluedorn, 2000) and for the weak correlations between its professional efficacy dimension and its other two (Loera, Converso & Viotti, 2014).

Maslach’s BO model is the most popular, commonly mentioned and cited across literature (Shoji et al., 2015; Benight & Cieslak, 2013). However, other BO conceptualisations, such as the two-dimensional Job Demands-Resources model (Demerouti et al., 2001) and the Conservation of Resources model, have emerged over the years and gained popularity (Hobfoll & Freedy, 1993). In both of these models, decreased professional efficacy is considered to be a separate construct. However, all models agree that the most salient contributor to BO is the continuous exposure to significant work overload and job demands. BO is a symptom of organisational functioning that describes and explores the negative experiences that professionals face at work. However, research suggests that BO needs to expand its scope outside of working environments and become multi-contextual (Bianchi et al., 2014; Bakker, 2009; Peeters, Montgomery, Bakker, & Schaufeli, 2005), which might assist the understanding of the complex interactions between stressors experienced at work and those experienced in other aspects of one’s life.

1.3 Why vicarious traumatisation might be worth exploring further

1.3.1 Incorrect operationalisation of vicarious traumatisation construct

The VT literature review identified weaknesses in the research regarding the mismanagement and inaccurate utilisation of the VT concept, as well as the interchangeable use of the terms VT, CF and STS. A study titled ‘Vicarious trauma and emotion work in documentary filmmaking’ (Melzer, 2019) attributed a different meaning to the term VT than the one described by McCann and Pearlman (1990). The study offers a general description of VT as ‘the trauma that may be experienced by someone who is witness to pain and suffering’

(Melzer, 2019, p. 41) but does not refer to the seminal works of VT, its symptomatology or the factors that define it. In addition, it does not make reference to the CSDT, suggesting an inconsistent approach to the concept of VT. Specht and Tsilman (2018) investigated VT in journalists in a study titled ‘Teaching vicarious trauma in the journalism classroom’ but, again, ignored the theoretical framework of VT. In addition, they merged the phenomena of PTSD and VT and proposed a new term, vicarious PTSD, without offering an explanation for their decision. Similarly, Lewis and King (2019) used the term vicarious trauma in their study’s title but did not describe it further in the study, suggesting that the term was used as an adjective rather than as a clinical term. In their study exploring the role of spirituality as a self-care mechanism, Dombo and Gray (2013) add the concept of moral injury as a potential consequence of VT. They offer rationale for its inclusion, although this is not verified by the CSDT. Branson (2019) underlines that the VT construct originates from a specific theory; thus, any modifications to its concept must be accountable to the CSDT.

The interchangeable use, merging and confusion of the terms VT, STS and CF was an overarching aspect identified in numerous studies. For instance, in their investigation on child welfare workers’ indirect exposure to childhood abuse trauma disclosures, Nelson-Gardell and Harris (2003) confused VT with STS and CF, repeatedly referred to VT as STS and described the CSDT as STS’s theoretical framework. Similarly, in their study on the effects of VT on Palestinian social workers, Blome and Safadi (2016) used VT, CF and STS interchangeably. In another example, Hazen et al. (2020) investigated VT among child welfare professionals and suggested that VT is also called CF and STS. Other studies failed to distinguish VT and STS and repeatedly referred to them as the same phenomenon (Waegemakers-Schiff & Lane, 2019; Butler et al., 2016; Jirek, 2015). Grundlingh, Knight, Naker, and Devries (2017) explored indirect trauma exposure in research assistants in Uganda; they positioned VT, together with STS and emotional distress, under the umbrella term secondary distress but did not provide details of commonalities between the three terms that led them to group them together. At the beginning of their study regarding VT in asylum evaluators, Mishori et al. (2014) mentioned that VT is also referred to as BO, CF, STS or occupational stress, but they later properly defined VT and offer a correct description which helps the reader. This lack of consensus among research and variability as to how the term VT has been operationalised and defined creates confusion and makes comparison of the different concepts challenging.

1.3.2 Need for qualitative research

Qualitative research can offer a personal and detailed exploration of VT; however, there is a lack of these studies in the VT field (Jirek, 2015; Chouliara et al., 2009). Hunter (2012) explored VT in eight therapists in Australia who had experience of working with survivors of child maltreatment, sexual abuse and domestic abuse. Although participants reported satisfaction from their work and expressed the belief that they had not been affected by VT, they reported disruptions to cognitive schemas of safety, trust, esteem, control and intimacy, which supports the CSDT theoretical framework. It may be that participants were, over time, able to assimilate the experienced disruption in their beliefs and restructure their belief system into a novel satisfying one. In concordance, other qualitative studies support the presence of VT among medical advocates (Long 2020; Wasco & Campbell, 2002), administrators (Dombo & Blome, 2016), psychologists (Sui & Padmanabhanunni, 2016), social workers (Possick et al., 2015), mental health staff (Hernandez-Wolfe et al., 2015), social work students (Shannon et al., 2014), clinicians (Barrington & Shakespeare-Finch, 2014; 2013), child welfare workers (Jankoski, 2010; Dane, 2000), therapists (Pistorius et al., 2008; Arnold, Calhoun, Tedeschi, & Cann, 2005; Benatar, 2000) and counsellors (Iliffe & Steed, 2000; Steed & Downing, 1998). The literature review identified approximately 97 studies in connection with VT, of which 73 were of quantitative and 24 of qualitative methodology – a considerable difference. A potential explanation might be that qualitative research takes longer to conduct and requires more time investment from both researchers and participants than quantitative studies usually do. Research suggests that qualitative studies are more consistent in their findings confirming the presence of VT in professionals, in contrast to quantitative studies (Howlett & Collins, 2014; Kadambi & Ennis, 2004; Sabin-Farrell & Turpin, 2003). A number of authors underline the need for further qualitative studies to fully understand VT and its cognitive, emotional and somatic effects on professionals (Andahazy, 2019; Makadia, Sabin-Farrell, & Turpin, 2017; Munger et al., 2015; Howlett, & Collins, 2014). However, Branson (2019) suggests that the results of qualitative research should be approached carefully as it is difficult to establish the reliability and validity of qualitative research measures.

1.3.3 Sample limitations of reviewed studies

A methodological limitation identified in the literature review was the characteristics of the samples. In some studies, information about the samples was insufficient or poorly described (Mishori et al., 2014; Joubert et al., 2013; Bishop & Schmidt, 2011). Joubert et al.

(2013) investigated VT in 16 social workers but failed to offer details of the demographic characteristics of participants or of their job settings. Furthermore, other studies used diverse samples that included a wide range of participants of multiple professional backgrounds and services, creating confounding variables which might have influenced the findings (Mishori et al., 2014; Pack, 2012; Williams et al., 2012; Argentero & Setti, 2011; Dreier & Wright, 2011). For example, Mishori et al. (2014) recruited 210 participants, of which 68 were psychologists, 35 were internal medicine doctors, 31 were family doctors, 36 were defined as others and 40 as missing data. A potential limitation of using heterogeneous samples is the creation of confounding aspects which might affect the results and subsequently contribute to further inconsistencies in VT research.

Another issue which emerged was the manner in which the populations under investigation were defined. Specifically, the terms counsellor, psychologist, therapist and psychotherapist were used interchangeably, creating confusion about participants' occupational backgrounds. Halevi and Idisis (2017) defined their sample of 134 participants as therapists; however, this definition was an umbrella term for psychologists, social workers, psychotherapists, criminologists and psychiatrists. Similarly, Williams et al. (2012) used the term mental health counsellors to include clinical social workers, counsellors, marriage therapists, family therapists and psychologists. Although some of these terms refer to related occupations with similarities between them, it is important to mention that each definition originally refers to a unique profession consisting of specific characteristics, educational backgrounds, training and skills. The use of umbrella terms impacts the homogeneity of the sample; considering different professions with different types of exposure to client trauma as one and the same could lead to inconsistencies in VT research findings.

1.3.4 Gap in vicarious traumatisation literature

The literature review yielded six UK studies that aimed to explore VT in 564 clinical psychology trainees (Makadia et al., 2017), two gymnastics coaches (Day, Bond & Smith, 2013), eight artistic gymnasts (Day & Schubert, 2012), eight interpreters (Splevins et al., 2010), one first responder (Keenan & Royle, 2008) and 30 professionals working in domestic violence services (Morran, 2008). Of these, five incorporated qualitative research designs (Day et al., 2013; Day & Schubert, 2012; Keenan & Royle, 2008; Splevins et al., 2010; Morran, 2008) and one followed a quantitative methodology (Makadia et al., 2017). Day and Schubert (2012) and

Splevins et al. (2010) collected their data through semi-structured interviews, whereas Day et at. (2013) and Keenan and Royle (2008) used case studies. Finally, Morran (2008) distributed open-ended questionnaires for participants to answer. None of the UK qualitative studies investigated VT in qualified psychologists, but Morran (2008) included psychotherapists in the sample of his study, together with probation officers and social workers. Psychotherapists and psychologists in the UK come from different training backgrounds and their professions are regulated differently. Psychotherapy in the UK is not under statutory regulation although it is overseen and supported by several organisations (e.g. British Association for Counselling and Psychotherapy [BACP], UK Council for Psychotherapy), none of which are officially recognised by the government (BACP, 2020; Hansard, 2020). In contrast, psychology is regulated in the UK by the Health and Care Professions Council, which protects certain titles (e.g. health psychologist, clinical psychologist) and promotes the use of evidence-based practice.

To the best of the author’s knowledge, the study by Makadia et al. (2017) was the only one that specifically targeted psychologists in the UK to investigate the relationship between exposure to trauma work and well-being. The results did not support the presence of VT, as no association was reported between exposure to trauma work and disruptions in schemas as measured by the TABS. However, the vast majority of the participants (75.2%) were in the first or second year of their training and had had very little exposure to trauma work (72.9% reported zero to two cases). The theoretical framework of VT suggests that the development of VT symptomatology is gradual and caused by the cumulative exposure to clients’ traumatic disclosures and participants might, therefore, not have been exposed to disclosures of trauma survivors long enough to develop VT. Currently, no UK-based research has investigated the effects of indirect trauma on psychologists working with trauma survivors in the NHS; thus, the aim of this study is to fill this gap by exploring the presence of VT symptoms in NHS psychologists.

1.3.5 Why psychologists in the National Health Service might experience vicarious traumatisation

The NHS has faced major budget cuts lately, resulting in work settings that are low in resources and finances and high in demand, such as mental health services (British Medical Association, 2018; Harris, 2017). According to the Royal College of Psychiatrists (2018), in

2016, mental health services received approximately £105 million less than in 2011. Although mental health conditions represent 23% of the total disease burden in the UK, only 11–14% of the NHS budget is allocated to them (Royal College of Psychiatrists, 2020; British Medical Association, 2019; Cummins, 2018). Underfunding in mental health services has had a significant impact on staffing numbers – in 2017, a total of 23,686 mental health staff left the NHS (Trades Union Congress, 2018). Since 2013, the number of people accessing mental health services has risen by a third, whereas the number of doctors has fallen by 2%, resulting in an immediate effect on service users' quality of care (British Medical Association, 2019; Trades Union Congress, 2018). Furthermore, research reports long waiting times, reduced service availability, difficulties in accessing services, and a significant decrease in mental health inpatient beds and out-of-area appointments (Trades Union Congress, 2018; Mental Health Taskforce, 2016; Unison, 2016).

The prevalence of trauma among mental health service users is growing (McManus, Bebbington, Jenkins, & Brugha, 2014), leading to considerable increases in psychologists' exposure to traumatic disclosures. Psychologists in the NHS are at higher risk of developing VT than other staff (e.g. nurses) because of the nature of their work. The chronic understaffing of mental health services has adverse effects on staff, who report heavy caseloads, being stretched beyond their capabilities and having no time for professional development (Unison, 2016). The British Medical Association (2019) reported that 57% of psychologists in mental health services described their service as understaffed. Furthermore, psychologists reported that their morale had deteriorated and that their caseloads were unmanageable, while access to training, reflective practice and occupational health services had considerably lessened over the last two years (British Medical Association, 2019). Research estimates that, in 2017, 38% of NHS staff reported feeling unwell due to work-related issues (NHS Survey Coordination Centre, 2018), while one in five staff left their role (The Health Foundation, 2019). In addition, the cost for the NHS of employee mental ill health accounts for an average of £1,794 to £2,174 per employee (Deloitte, 2014). A decline in NHS staff's mental health due to indirect exposure to client trauma might increase absenteeism, turnover and loss of experienced professionals (White, 2006; Sexton, 1999). The loss of experienced psychologists could have a particularly negative impact on the NHS as it would require employing and training new psychologists to fill the open positions, creating additional costs to services. Currently, around 12% of all psychology vacancies in the NHS are in mental health services (British Medical Association, 2019; Health Education England, 2017), illustrating the need to acknowledge that the nature of work done by psychologists in the NHS can be challenging for their psychological well-being. Recent studies suggest that the coronavirus disease 2019 pandemic has the potential to significantly raise the prevalence of trauma among people and increase the access demand for already understaffed NHS mental health services (Galea, Merchant, & Lurie, 2020; Holmes et al., 2020; Shi & Hall, 2020). As a result, psychologists, as the frontline healthcare workers in treating trauma, might be required to work with a higher number of trauma survivors than they already do. Organisational limited resources due to chronic underfunding, combined with increased exposure to traumatic disclosures, might lead to the development of VT in NHS psychologists.

1.4 Summary

Since its conceptualisation, VT has instigated a number of scientific discussions on its distinction from other concepts (Quitangon, 2019; Molnar et al., 2017; Tabor, 2011; Dunkley & Whelan, 2006). Numerous scientists agree that certain reactions emerge following repeated indirect exposure to other people’s trauma and that the worldviews, intimate relationships and occupations of professionals can be affected by their exposure to client trauma. Thus, the focus of the scientific community should not be shifted by the debates on terminology and phenomenology but should instead remain on the professionals affected by indirect exposure to client trauma and on conducting further research to improve their quality of life. To bridge the gaps and inconsistencies identified in the literature, the current study (1) uses the conceptualisation of VT to investigate and highlight the potential effects of exposure to clients’ traumatic disclosures on psychologists working in the NHS, (2) employs a qualitative methodology for an in-depth exploration of participants’ experiences and (3) recruits a relatively homogeneous sample to improve the accuracy and quality of the resultant data.

2.0 METHODS

2.1 Study design and rationale

The author and researcher of the present study is a 34 years old male, named Anastasios Toumpanakis. During the conduct of this research the author was a doctoral candidate of health psychology at City, University of London and a trainee health psychologist at WLMHT. Prior to this study, the author has conducted two theses at master of science level and one published research at the British Medical Journal Diabetes Research and Care.

Qualitative methodology approach is mainly focussed on how people make sense of the world, how they experience events and what meaning they attribute to phenomena (Pietkiewicz & Smith, 2014). In this study it is important to understand the lived experience of the participants within the reality they reside in, and the sense they make out of it; more specifically to experience client's traumatic disclosures and its potential impact on their lives.

A qualitative research approach was employed in order to explore the subjective experiences such as the cognitive, behavioural, emotional and physiological changes that affect psychologists exposed to traumatic disclosures of their clients in the NHS. Qualitative research approach seeks to understand the meaning of life experiences and phenomena in social context through interpretation, in contrast to quantitative research approach which searches for causal relationships through statistical analysis (Gray, 2014; Pietkiewicz & Smith, 2014). The researcher's preoccupations, cultural background and reflexivity are considered and acknowledged, rather than being viewed as methodological limitations that need to be accounted for and defended against (Morrow, 2007). The understanding of an under-researched and unexplored topic as VT in the NHS services calls for the use of a qualitative approach.

Qualitative analysis is a useful tool for developing an in-depth understanding of a phenomenon or to develop and extend theory of that phenomenon (Hsieh & Shannon, 2005). According to Wilkinson, Joffe, and Yardley (2004), qualitative research provides an opportunity to gain appreciation of: (1) how people's experiences are shaped by their subjective, sociological and cultural point of view; (2) the ways that individuals make active sense of their experiences; (3) the different perspectives of people in different circumstances, and (4) the psychological, linguistic, social and cultural factors which influence individuals' process of creating meaning out of their experiences. Qualitative research can explore not only the emotional aspect of health and illness but also what people feel and think about a particular event, what is important to them and what is not whilst attempting to explain the reasons behind people's behaviour (Gooberman-Hill & Chesser, 2011). In addition, it is a suitable research approach as it takes into consideration the sensitive nature of the data and the complexity of human experience in real life contexts. For example, the occurred changes in psychologists' psyche after exposure to clients' traumatic disclosures (Silverman, 2005). By employing a qualitative methodology, the researcher of this study was able to investigate individuals' experiences of exposure to client's trauma and enabled them to extract and analyse descriptive and rich data. In addition, the present research followed the *consolidated criteria for reporting qualitative studies* (COREQ) (please see Appendix 1) guidelines which were developed in order to promote comprehensive reporting of qualitative research (Tong, Sainsbury, & Craig, 2007).

2.2 Participants and recruitment

The participants in this study were qualified psychologists who had working experience with survivors of trauma in the NHS services. Participants were recruited through researcher's professional and personal contacts within NHS organisations, which might limit generalisability of the results. Additionally, recruitment aimed to be purposive in that it involved psychologists who had worked with survivors of trauma in the NHS.

The main concern of IPA is the richness and details of individuals' accounts and therefore IPA studies usually benefit from a concentrated focus on a small number of cases (Pietkiewicz & Smith, 2014; Smith, Flowers, & Larkin, 2009). There are several suggestions as to how many participants an IPA study should have. According to Cresswell (2012) a phenomenological study could have between 2 and 25 participants. Cresswell (2013) underlines the importance of homogeneity and that participants should have experience of the studied phenomenon. Morse (1994) recommends at least 6 participants for phenomenological studies while Kuzel's (1992) recommendation is between 6 to 8 participants for a relatively homogenous sample. Turpin et al. (1997) agree with Kuzel (1992) and suggest 6 to 8 participants for an IPA study because this sample size allows the researcher to examine similarities and differences among participants without being overwhelmed by the gathered data. Following the above suggestions and in view of range and experience, a sample of 9 participants seemed appropriate to examine the phenomenon of exposure to clients' trauma in detail. This sample size favoured an idiographic and in-depth analysis of a phenomenon in a specific group of people (e.g. psychologists) (Smith, 2004); this involved the selection of a relatively homogenous group of participants. There were no issues of non-participation or dropouts. Nine individuals were offered to participate and all of them matched the inclusion criteria and were selected to take part in the study.

The inclusion criteria were that participants must: (a) be qualified psychologists; (b) have working experience in the NHS services, and (c) have worked with trauma survivors. Exclusion criteria were: (a) unqualified psychologists, and (b) psychologists with no working experience with trauma survivors in the NHS services. There was no restriction of age-limit or gender.

Personal networks and social media (e.g. Facebook, LinkedIn) were used to advertise the study's poster (please see Appendix 2). All interested participants were identified through personal networks. After expressing an interest to be part of the study, the participants received an information sheet with more details about the study via email (please see Appendix 3). In addition, a demographic questionnaire was filled before the beginning of each interview (please see Appendix 4).

The group of interviewees consisted of 9 individuals (6 females/3 males) with an experience working in the NHS ranging from 4 to 25 years (M = 12.8 years) (please see Table 1). All of the participants had direct contact with service users. The participants came from different ethnic backgrounds as five participants were of British ethnic origin, one was Irish, one was German, one was Greek and one was from South Africa. In addition, five of the participants defined themselves as Christians, one as Agnostic, one as Atheist, one participant declared no religious beliefs and one preferred not to disclose their religion.

Table 1: Demographic information of participants

Participants (pseudonyms)	Gender	Age	Marital status	Religion/belief	Ethnic origin	Years of work in the NHS
Maria	F	36	Single	Christian	Black British	4
Sofia	F	Prefer not to say	Prefer not to say	Christian	White Irish	25
Laura	F	30	Single	Prefer not to say	White British	8
Nicky	F	33	Single	Atheist	White British	10
Peter	M	46	Married	None	White British	19
Tom	M	31	Married	Christian	White British	10
Claire	F	32	Single	Christian	White Greek	8
Kelly	F	41	Separated	Agnostic	White German	17
Robert	M	60	Single	Christian	White South African	15

2.3 Data collection and interview guide

Semi-structured, in-depth, one-on-one interviews between the participants and the researcher were considered to be the most appropriate method in order to gather this study's data. Semi-structured interviews are suitable to working with small samples and are useful for studying specific situations (Laforest, 2009). In addition, since they provide access to perceptions and opinions, they are effective for gaining insight into issues that are not immediately perceptible by individuals but that nonetheless cause concern (Laforest, 2009). This kind of interviewing collects detailed information in a style that is conversational and is often used when the researcher wants to delve deeply into a topic and to understand thoroughly the answers provided (Harrell & Bradley, 2009).

A guide with questions and topics that must be covered was decided in advance and was used in the semi-structured interviews (Harrell & Bradley, 2009). The interview guide was developed by following Saakvitne and Pearlman's suggestion on synthesising the assessing VT tools/worksheet (1996). The worksheets suggested by Saakvitne and Pearlman for assessing the presence of VT are open-ended questionnaires. They provide, therefore, a rich source of information about personal experiences of indirect trauma exposure through clients' disclosure in addition to exploring for the presence of VT. They can, furthermore, be used in a flexible manner such as to provide a basis for further research. In this case the information was used to generate further exploratory questions in the form of an interview schedule. More specifically, there are three worksheets for assessing the potential presence of VT: the first focuses on potential contributing factors that might increase symptoms of VT; the second one examines one's current emotional experience and the third uses the CSDT model of self to explore which aspects of the individual might show evidence of VT (Saakvitne & Pearlman, 1996). The interview guide (please see Appendix 5) drew upon these suggested worksheets and was used in a flexible manner. The researcher engaged with the participants by posing the questions in a neutral manner and listening attentively to their responses (Mack, Woodsong, MacQueen, Guest, & Namey, 2005). The researcher ensured that the questions were open-ended in order to allow space and flexibility for original and unexpected issues to arise and to investigate in more details with further questions if needed (Willig, 2013). The order of the questions was changed when necessary based on participants' inclination to share their experiences on more relevant questions to them. In addition, the interviewer used cues in order to encourage the participants to further elaborate in the discussed topic areas. The researcher also ensured that the interview questions would not contribute to any form of bias for the participants (free from hidden preoccupations and biases as possible).

Prior to the interviews with the participants, the researcher carried out a pilot interview with a colleague in order to further develop interviewing skills and gain an understanding of whether any modification should be applied to the interview questions. Interview questions were non-leading and open-ended in order to provide participants with the freedom to lead the discussion and promote their own meaning for their experiences. The interviews were arranged at a mutually convenient time and location for both the participants and the researcher. The interviews took place in a quiet environment away from the participants' work place. The interviews were carried out in participants' private offices or residences and the length of the interviews was between 30 and 70 minutes.

As the aim was to make the participants feel comfortable, grow in confidence and build a rapport with the researcher (Jacob & Furgerson, 2012), each interview started with an introduction where they were informed of the process and were clearly reminded that they could stop the interview if they were to feel uncomfortable in any way. The interviews began with descriptive questions regarding participants' views on working in the NHS services and experience of working with clients. The main body of the interview consisted of three topics of a more challenging nature: (a) views regarding issues arising from clients who sustained traumatic or emotionally difficult experiences; (b) views on changes of personal well-being, and (c) views regarding support. Some examples of the questions which were included in the interview guide are:

> *"How do challenging and traumatic situations at work affect your lifestyle in terms of your sense of self, world views, spirituality, work motivation?"*
> *"How do you switch off from the involvement with patients?"*
> *"How do you recover after challenging moments with patients? What are your typical coping strategies? What do you find more difficult to overcome?"*

In the last part of the interview participants were asked to describe a specific time that they successfully dealt with a challenging case, in order to elicit a positive mood and emotions in the participants. Once the interview came to an end, participants were thanked for taking part in the research and had the opportunity to ask further questions regarding the study. A debrief form was also explained and given to them (please see Appendix 6). No repeat interviews carried out.

2.4 Ethical consideration

Prior to any research taking place ethical approval was sought obtained from City, University of London Psychology Department Research Ethics Committee (please see Appendix 7). As the study did not use resources and premises of the NHS nor was conducted during participants' working hours, there was no need of approval from the NHS Health Research Authority. The issues of debriefing, confidentiality and informed consent were considered carefully prior, during and after the study.

Participation in the study was voluntary and therefore no individual was forced to participate. In addition, the right to withdraw from the study if they wish to do so without providing any explanation was specifically underlined. Every participant was fully informed of the aims and objectives of the research and was given a consent form to read and sign prior to interview (please see Appendix 8). Also, participants were provided with the researcher's and the supervisor's contact details in case participants had any additional questions or concerns at any stage of the research process. Individuals were provided with one week to take in all the information they had been provided with, to consider their participation in the study and to ask any questions.

Confidentiality was taken very seriously throughout the study. The consent forms were stored in the researcher's locked cabinet. The recorded interviews were stored on a laptop and secured with a password. All identifying details (e.g. working places) and names of the participants were changed during the transcription of the recordings to maintain anonymity. All data has been treated in compliance with the Data Protection Act 1998 (Legislation, 2018). The data will be kept for 5 years and then will be destroyed appropriately.

No foreseeable risks were identified in participation in this study. Questions regarding challenging and difficult cases could however trigger upsetting emotions for the participant. The researcher discussed with the participants prior to the interview what their supportive resources and protective factors are. Also, before each interview each participant was informed that if upsetting emotions arise during the interview, the participant could ask to stop and/or suspend the process. Further consideration had been done if additional care would be needed: the participants would be asked to contact their general practitioner (GP) or available helplines of emotional distress (e.g. Mind, SANE); fortunately, no participants required any sort of additional emotional support.

2.5 Transcriptions

The analysed data consisted of audio recordings of the interviews and was transcribed word-for-word in order to ensure that the written text reflected the audio recordings. Vocal sounds (such as um), repetitive words, swear words, broken words and laughs were included in the transcripts. The aim of the researcher was to present the original account of each participant and transfer their words on paper in as much detail as possible. Each recording was played back again right after the end of each interview in order to maintain accuracy. Following each playback, the researcher began the transcription process whilst constantly playing back the recorded interviews in order to achieve a high level of accuracy in the transcription process. This technique helped the researcher to remember the context of each interview which further aided in the analysis process. Upon completion of each initial transcription the researcher played back the recordings one final time in order to add any missing words or delete any extra words. As mentioned above, details that could potentially be identifiable had been removed or altered in the transcripts. The software that was used to conduct the analysis was Microsoft's Word. The transcripts were not returned to participants for corrections as the audio recordings were clear.

2.6 Data analysis

Interpretative Phenomenological Analysis (IPA) was chosen as the appropriate analytical methodology for this study. It is a qualitative approach developed within Psychology for the examination of lived experiences and its aim is to investigate how people make sense of their life phenomena and comprehend these lived experiences and worldviews (Larkin, Watts, & Clifton, 2006; Smith, 1996). The researcher's goal is to incorporate their professional knowledge and present an account based on the extracted data in order to comprehend and interpret the meaning that participants might give to their subjective experiences in a particular context (Smith et al., 2009). Data saturation is not generally a goal of the IPA, rather it is intended that rich personal accounts are obtained from the participants (Hale, Treharne, &

Kitas, 2008). However, after conducting a total of 9 interviews, data saturation was evident at the point when neither new, nor original superordinate or subordinate themes emerged from participants interviews. It can be argued though that each individual’s experiences are so unique that true data saturation can never really be fully achieved (Hale et al., 2008).

The three theoretical standpoints on which IPA is based on are phenomenology, hermeneutics and idiography. The concept of phenomenology was defined by Husserl as the study of essence of conscious experience (Finlay, 2011). Following Husserl’s definition, Smith (2017) suggests that IPA’s concern is to examine experience without being overly influenced by previous psychological theories or by the personal inclinations of the researcher. When using the IPA, the researcher must be aware of and put aside their own biases by keep returning to the data when making findings (Smith, 2007). This is achieved by line-to-line in-depth analysis of the transcribed interviews (Smith et al., 2009). The concept of phenomenology was further developed by Heidegger who suggested that phenomena are relevant when they become meaningful in the context of someone’s life and that people are only fully part of reality and are able to make sense of it while being immersed in reality itself (Finlay, 2011). Therefore, in a phenomenological approach openness to the perception of the reality is needed from the researcher as well as an awareness of their personal biases that can hinder the comprehension of individual’s experiences (Finlay, 2011; Larkin et al., 2006).

As Smith et al. (2009) point out, Gadamer described hermeneutics as a process that challenges the researcher to review their prejudices in light of a newly acquired knowledge of the studied phenomenon. This knowledge can change and be modified according to the interactive relation to the data that bring in new insight in the researcher (Smith et al., 2009). IPA operates with a double hermeneutic as the researcher tries to make sense of participants’ meaning-making process of their subjective experience (Smith & Osborn, 2015). For the researcher the skill of being able to produce an analysis closely tied to the participant’s account of experience is of utmost importance in IPA and carries significant importance during the research (Smith, 2017). The hermeneutic cycle of analysis was adopted several times during the process of data analysis, enabling a continuous interpretation and re-elaboration of data as they emerged from participants’ experiences.

Finally, ideography refers to the attention to specifics and details. More specifically, to the detailed analysis of personal experience case-by-case so in the final report each participant's experience has a presence and there is an articulation of both convergence and divergence within the sample (Smith, 2017). Ideography highlights the way specific people understand a particular phenomenon in a particular context (Smith et al., 2009). It is concerned therefore with the thoroughness and the subtle distinction of meaning while analysing data in order to give a full and vivid account of human experiences which could escape the nomothetic or more general approaches to psychological enquiry,

Specifically, for this study, IPA was incorporated in order to explore the experiences of psychologists with working experience in the NHS and to channel and highlight their beliefs and worldviews (Larkin et al., 2006). Smith et al. (2009) suggest certain steps of analysis that provide guidance and structure for the process of data analysis. The steps in this research will be schematically described in the following stages.

2.6.1 Stage 1

Before proceeding to the analysis of a new interview, Smith et al. (2009) suggest analysing an interview (one case) in detail first. Therefore, the first stage of data analysis required an in-depth understanding by carefully reading the transcript in order for the researcher to familiarise themselves with the collected data. By reading through the transcript more than once, the researcher began the process of understanding and appreciating the participant's world and became actively engaged with the data. In addition, the researcher developed a sense of the overall structure of the interview and highlighted locations of rich and detailed sections, contradictions and paradoxes in participant's account.

2.6.2 Stage 2

The second stage involved the initial exploratory coding which was an incredibly detailed and time-consuming level of data analysis as it involved a word-for-word/line-by-line review. In this stage the researcher kept notes and examined the semantic content and language use on a very exploratory level by identifying the specific ways in which a certain participant talks about, understands and thinks about the discussed issue. The researcher's comments and notes were descriptive, conceptual, interpretative or linguistic and were annotated on the right-hand margin of the transcript.

2.6.3 Stage 3

The third stage was focused on identifying and developing the emergent themes by using the initial exploratory notes from the previous stage. The researcher transformed initial notes on the right-hand margin into more specific themes and phrases while ensuring connection between the participant's words, the researcher's interpretations and the theme titles. These titles were then annotated in the left-hand margin. The emerged themes were then clustered and labelled case-by-case on a separate grid. It was also of utmost importance at this stage for the researcher to re-read the previously coded transcript alongside the identified themes in order to ensure that the themes fitted the original text appropriately.

2.6.4 Stage 4

After conducting stages one to three for all 9 interview transcripts, the researcher moved to the final stage of the analysis. The fourth stage was also an iterative process and was dedicated to the cross-case analysis that looked for similar or discordant patterns and connections between participants. A superordinate themes table was created acknowledged each participant's unique contribution (Smith et al., 2009) and represented the phenomena experienced by the participants.

2.7 Reflexivity

Reflexivity is an integral part of the research process and needs to be carefully considered by the researcher in order to identify how it may have affected the research itself at any stage. Malterud (2001) suggests that reflexivity is the attitude of attending systematically to the context of knowledge construction, especially to the effect of the researcher at every step of the research process. Researcher's personal and professional background will have an effect on issuer like the chosen field of study, the scope of research, the methods that would be considered most appropriate for the research, the results and lastly the presentation and communication of research's conclusions (Malterud, 2001). Carrying out this type of research should ideally go hand in hand with ensuring that there exists a great amount of self-awareness on the researcher's part in order to achieve integrity and credibility. This could be achieved by identifying, acknowledging and examining professional and personal preconceptions and influences brought into the study by the researcher before and during the design of the study, the recruitment of participants, the collection and the analysis of the data (Finlay, 2002; Malterud, 2001). According to Smith and Osborn (2003) this dynamic process of the research is being acknowledged by IPA and the participants' experiences are seen through the interpreting eyes of the researcher. IPA emphasises in the importance of reflexivity in research as data results rely solely on the researcher's interpretation and acknowledges that different researchers would extract different results from the analysis of the same data (Pietkiewicz & Smith, 2014; Smith, 2011; Giorgi & Giorgi, 2008).

The chosen sample method (snowball and personal networks) means that the researcher had previous contact with a number of participants in a professional level. In effect, a number of participants might have felt obliged to participate in the research. In addition, there is also the possibility that the researcher chose certain participants to take part in the study based on their past professional relationship and whether he felt that they would be more suitable and insightful for the purposes of the research. In addition, the analysis and interpretation of the results might have been influenced by an awareness of participants' previous experiences.

In order to achieve integrity, careful and constant examination of the researcher's professional and personal influences and preconceptions at all stages of the research process was essential (Finlay, 2002). In order to continuously verify the researcher's level of interpretation when in contact with the participants, a reflexive journal was kept. Moreover, the researcher reported their perspectives, beliefs and biases in the journal as it was considered to be valuable and essential to document how preconceptions, assumptions, values and beliefs might have become an influence during the research process. The purpose of keeping a reflexive journal was to identify and to rule out any present preoccupations and biases while acknowledging their integral part in the research process (Finlay, 2008). To summarise, the research should always embrace a reflexive position towards all stages of research (e.g. recruitment, data collection, data analysis) and make sure that preconceptions and biases are not reflected during this process.

2.8 Epistemological approach

This study has adopted IPA as a qualitative approach. IPA requires a reflexive approach and a certain amount of flexibility and exploration on the researcher's part (Willig, 2013; Larkin et al., 2006). The aim of this study is to explore participants' subjective experience of how they make sense of their feelings, thoughts and perceptions. This study focuses on the actual process by which individual construct meaning and knowledge in their lives, rather than attempting to determine what is ‘true’ in the world (Willig, 2013). Therefore, this study takes a social constructionist/relativist ontological approach which aims to explore the lived experience of VT in psychologists with NHS experience.

Social constructionism offers a range of approaches (from radical to moderate) when it comes to understanding what ‘knowledge’ is. A more radical explanation tends to be preoccupied with the ways in which individuals within very specific social contexts deploy discursive resources in order to achieve a particular interactional objective (Willig, 2013). According to this explanation the researcher is not interested in the inner experience of the participant as it is assumed that the participants will construct a different version of events depending upon the social contexts within which they find themselves (Willig, 2013). In contrast to that, this study has adopted a more moderate standpoint that appreciates the experiences of the participant within a wider context (Willig, 2013).

Larkin et al. (2006) suggest that IPA combines the rich description of a phenomenological ‘core’ with the speculative development of an interpretative account. This study has embraced the interpretative range and flexibility of IPA, whilst staying connected to the participants’ accounts and disclosures. IPA goes beyond description as its goal is not only to describe a phenomenon but to explore what it means for the individual to experience it.

2.9 Reliability and validity

The qualitative researcher should consider both validity and reliability when designing the study, analysing the study’s results and evaluating its quality (Cypress, 2017). The terms of validity and reliability though were initially developed in order to meet the standards of quantitative research. Reliability referred to the consistency and stability of research results while validity referred to the trustworthiness of the research results (Whittemore, Chase, & Mandle, 2001; Altheide & Johnson, 1994). Specifically, in quantitative research, the concept of reliability suggests that the amount of times that a study’s results can be replicated, reflects the reliability of the phenomenon (Merriam, 1995). On the other hand, qualitative research deals with human behaviour and interaction which is unlikely to remain the same or be fixed. Moreover, qualitative methodology does not use quantification and/or statistical procedures to produce its results (Cypress, 2017). In qualitative research reliability describes consistency within the employed analytical procedures and can be achieved by being consistent, careful and mindful in the application of research practices, analysis, conclusion and limitations of research findings (Davies & Dodd, 2002; Long & Johnson, 2000). The researcher of the current study achieved reliability by being consistent, mindful and careful during data collection (e.g. explaining the process in detail to all participants, following the same interview schedule in every interview), data analysis (e.g. making sure to follow the IPA guidelines), conclusions and limitations of data findings (e.g. being aware of own biases and prejudices that could potentially contaminate the interpretation of the results) (Davies & Dodd, 2002; Long & Johnson, 2000).

Validity in research is associated with the accuracy and veracity of the results (Van Manen, 1990). In qualitative research the validity of research results is associated to the continuous verification and cautious recording of the data by the researcher during the study process. Moreover, Cypress (2017) suggests that validity means investigation, exploration, theorising and questioning which are all means to ensure rigour in a qualitative research. In this study, the researcher tried to assess validity in several ways. Two independent qualitative researchers cross-checked the data analysis of each superordinate and subordinate theme of all participants (triangulation) (Cypress, 2017; Henwood & Pidgeon, 1992). Data triangulation could result in broader understanding of the phenomenon of interest (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014). The researchers made their suggestions and recommendations which were implemented but overall, they agreed with the researcher's data analysis. In addition, the researcher maintained a reflexive journal throughout the study in order to keep notes that would be relevant and beneficial for the research (as several times he needed them for analysis purposes), e.g. to confirm specific observations that were made during the interview stage (Cypress, 2017). The use of triangulation and reflexive journal establishes confirmability which refers to the internal coherence of the data in relation to the analysis, results and conclusions (Anney, 2014; Bowen, 2009; Koch, 2006; Denzin & Lincoln, 1994). Moreover, validity was achieved by the use of open-ended questions during the interviews as the comprehension of the phenomenon is valid if participants are allowed to share their understanding of the phenomenon and speak freely about it according to their own perception and beliefs (Cypress, 2017; Morse, 1991). Validity was assessed as well through reflexivity as the researcher became aware and alert of his own biases, beliefs and assumptions that could affect the research process and therefore the bias risk was minimised (Cypress, 2017).

3.0 RESULTS

The data analysis using IPA methodology yielded a number of themes which attempt to present the experiences and emotions of psychologists of working with survivors of trauma in the NHS. The analysis elicited two superordinate themes consisting of four and six subordinate themes respectively which were shared by the majority of the participants (please see Table 2). The participants' names and any identifying details were changed in order to maintain anonymity. Data in the form of direct quotes from the interviews with the participants is used. The transcribed text of the interviews is presented un-edited in order to preserve the originality of participants' language, including repetitions and grammatical errors. The participants did not provide feedback on the results.

Table 2: Themes

Superordinate themes	Subordinate themes
1. The impact of clients' traumatic disclosures on the psychologist	1. Psychological and physical reactions 2. Questioning belief systems 3. Social and relational impact 4. Coping mechanisms (switching off)
2. Dealing with clients' traumatic disclosures in the National Health Service context	1. Job expectations 2. Support systems 3. Caseload 4. Sense of safety 5. Culture influence 6. Considerations of improving systems

3.1 The impact of clients' traumatic disclosures on the psychologist

This superordinate theme is focused on the symptoms caused to the psychologists from the traumatic disclosures of their clients. The effects of encountering and treating clients who suffer from trauma have been identified and reported by the participants in several areas: psychological and physical reactions, questioning belief systems, social and relational impact and adapted coping mechanisms.

3.1.1 Psychological and physical reactions

This subordinate theme relates to the psychological and physical impact that the participants faced during their work with clients who suffered from trauma. All of the psychologists in the study were exposed to horrendous and graphic details and accounts of traumatised incidents of their clients.

From the participants' interviews it was evident that they experienced and reported symptoms of PTSD such as recurrent distressing dreams, intense or prolonged psychological distress, marked physiological reactions, recurrent involuntary and intrusive distressing thoughts and images in relation to their clients' traumatic accounts. They also experienced negative alterations in cognitions and mood associated with the traumatic disclosures of their clients, intense and overwhelming emotions such as anxiety, depression, anger, frustration and fear.

Claire reveals the way she was reacting after seeing a man from Iran who had been tortured back in his country for political reasons.

> *"Every time that he was leaving the room I was... I have a pillow next to me and I put the pillow around my face and I was crying."*
> *(Claire, 32; 8 years in the NHS)*

Claire's strong reaction suggests that an accumulation of emotions and thoughts had taken place and needed a way out. In another case, Claire describes how she was affected by another client's disclosure as well. Claire's client was a Somali man who had been trained as a soldier since he was a child and he fought in the civil war.

> *"I visualised him as a little boy with a gun and I visualise myself as a little girl with a doll. You know, I started welling up in the session and I couldn't hold my tears. (...) I ended up like crying (...) It's like the break of the dam, you know."*
> *(Claire, 32; 8 years in the NHS)*

Here Claire compared herself at the age of her client when he was a child soldier and that led to an overwhelming but honest reaction to her client's traumatic disclosure. Following Claire, Peter describes his recurrent nightmares and intrusive images and thoughts after working with a young teenage girl who had been constantly a victim of a paedophile. At one incident, the girl's assailant released his dogs on her cat and the dogs ripped the cat to pieces. Afterwards the girl was forced by her assailant to pick up and clean the pieces of her dead cat. Peter discloses the impact of this disclosure on him.

> *"I've got a cat and that absolutely traumatised me, that image. The idea that someone would callously for a bit of fun set their dog on a cat and tear it to pieces. For about three years I wouldn't let my cat out at night. Even during the day she had very limited privileges to go out. Like I was just suddenly just terrified that one of these people that seemed like a human might have been in the neighbourhood. Yeah, well I actually had nightmares about my cat being ripped up by dogs."*
> *(Peter, 46; 19 years in the NHS)*

In addition, Peter reports a sense of detachment as a result of repeated exposure to clients' traumatic disclosures.

> *"I worry that I've gone too much the other way and I just don't care anymore. (...) my joy of working with these people that I used to get is now a kind of temper cynicism."*
> *(Peter, 46; 19 years in the NHS)*

Robert graphically describes the disclosure of a client that affected him greatly. The client was a refugee who was kidnapped with his brother and was forced by their tormentors to witness some horrible atrocities.

> *"As I am talking to you now, I'm finding it difficult because of the images, I've got these images they're very, very alive. And the story that he [the patient] told me was that he had been kidnapped and he was in a room with about forty people for about a month and a half and then every few days somebody would come in and just arbitrarily grab somebody, hang them upside down and skin them and leave them hanging. (...) I was, I was stunned. I was just absolutely stunned."*

> *(Robert, 60; 15 years in the NHS)*

After this explicitly graphic and horrible disclosure, Robert ended up experiencing intrusive thoughts and images. While describing the event of that day he was visibly overwhelmed. Robert at another instant mentions his reaction during a session with a client from Afghanistan who saw his family being tortured and then he came to the UK as an asylum seeker. Robert describes his emotions resulting from that session.

> *"Anger, massive anger. (...) with the anger I feel a lot of, um, a lot of muscle tension. I feel a lot of tension building up in my jaw that's the sign to me that I'm getting angry. I begin to clench my jaws."*
> *(Robert, 60; 15 years in the NHS)*

Similarly to Robert, Nicky had a physical reaction as well to her client's traumatic disclosure regarding a sexual assault he suffered when he was a young boy.

> *"Like I'd been punched in the stomach, I was like feeling just like really overwhelmed (...) like something had been pulled out. (...) Um, just sort of really flattened me. (...) I just sort of sunk down and felt (...) more despondent I suppose."*
> *(Nicky, 33; 10 years in the NHS)*

In other cases, participants demonstrated another PTSD-like symptom and what appears to be vicarious survivor's guilt. *Survivor's guilt* stems from being alive or uninjured in a circumstance in which another person was physically or psychologically injured or died (Hutson, Hall & Pack, 2015). Survivor's guilt is a persistent negative trauma-related emotion which is an associated descriptive feature of PTSD (American Psychiatric Association, 2013).

Sofia experienced vicarious survivor's guilt particularly the period she was working with people from Iraq and Iran while Laura describes her experience of her emotional alteration regarding her life as she compared it with the lives of her clients she was working with.

> *"I'd feel guilty going to bed at night because I [was thinking], almost like a survivor's guilt: I'm going to bed and these people are in agony in those jails where they're not allowed to sleep and where they're crushed on top of each other and could be pulled out and tortured during the night."*
> *(Sofia, 25 years in the NHS)*

> *"It [the disclosure of her patient] made me think a lot about my own life and my own parents and how lucky I've been (...) I think it was probably a bit of a guilt there about, yeah, the life I've had just been very privileged in comparison and that I've been very lucky and then just because he happened to be born somewhere else in the world that he has a completely different life which seems to be unfair. And then it just made me feel angry because of unfairness"*
> *(Laura, 30; 8 years in the NHS)*

Both participants were overwhelmed by feelings of guilt of having a life without the horrendous experiences of their clients and other powerful emotions, such as anger, resulting from the realisation that the world is not fair. In addition, another psychological impact of the traumatic disclosures of clients on the psychologists was the feelings of uselessness. Participants described how professionally worthless they felt at times in helping their clients.

> *"[I was] worried and leaving you feel bad about your skills as a therapist, you feel like "God, I've let this person down, if I was just better, I would know what to say".*
>
> *(Peter, 46; 19 years in the NHS)*

> *"[I am] feeling a bit useless sometimes (...) I think sometimes it does make you want to be the 'magic rescuer', um, and that creates a lot of pressure."*
>
> *(Nicky, 33; 10 years in the NHS)*

> *"If you're [the patient] type two type trauma (...) I know we can't help them. Um, that's negative to say. What I mean is to really deliver that complex PTSD work I don't think we can here in the NHS. (...) those [patients] who come to us witnessed beheading, been*

> *raped themselves, hours of the days and months of torture, um, family being killed (...) our limit of sixteen to twenty-four sessions working with these people is impossible."*
> *(Tom, 31; 10 years in the NHS)*

> *"I do find it difficult that in some ways for them type of clients you feel like you going to put a sticky plaster on it. Um, and you can feel quite overwhelmed because where do you start?"*
> *(Tom, 31; 10 years in the NHS)*

Tom overwhelmingly describes his desperation as a result of the knowledge that he is unable to help clients with complex trauma and the NHS policy of session limit which makes him feel that is impossible to carry out his work. There is an indication here that some clinicians neither have the skills nor working environments suitable for dealing with this kind of stark trauma. The combination of factors is likely to precipitate burnout in people exposed to such no conducive contexts for treating trauma. For Sofia, burnout is a concern as she underlines.

> *"There's a huge scope for burnout in that area. You know, I don't feel inclined to go back to it. I feel I'm probably burned out at this stage as I've done it. (...) I wouldn't see me having the strength to go back and face that kind of thing day in day out."*
> *(Sofia, 25 years in the NHS)*

Sofia strongly believes that there are many other psychologists with burnout as a result of their work. In addition, she mentions that she would not be able to work again with clients who have experienced trauma on a daily basis. There is a tone of exhaustion in Sofia's voice while disclosing this.

All the participants reported at least one PTSD-like symptom of psychological or physical reaction that was attributed to the impact of their prolonged exposure in the field of trauma. They reported an array of emotional responses resulting from engaging with traumatised clients and some of these emotions and reactions tended to persist for weeks or months after they had seen a particular client. Symptoms varied from instant psychosomatic reactions during sessions to prolonged symptoms that lasted for months including nightmares, persistent emotional state, feelings of detachment or estrangement from others and persistent and negative beliefs or expectations. This relates to the next subordinate theme in which the changes in the belief systems of the participants will be addressed.

3.1.2 Questioning belief systems

Belief systems are interrelated structures and norms that define people's sense of reality and with its utilisation people make sense of the world around them (Uso-Domenech & Nescolarde-Selva, 2016). Each person's belief systems are reinforced by culture, religion, political and social viewpoints, experience as to how society works, etc (Uso-Domenech & Nescolarde-Selva, 2016). Belief systems are a living organism and can be changed, shaped and altered by the experiences people are exposed to over the course of their lives. This theme addresses the effect of participants' lengthy exposure to traumatic and challenging disclosures of their clients on their belief systems and how these belief systems were modified after their exposure.

Sofia describes how her work with traumatised people has changed her perception about the world over the years.

> *"I'd always felt an invincibility. Women and children don't get harmed. Now I know that they do. Now I know that human cruelty is beyond belief, um, and that what people suffer is beyond belief. (...) in terms of safety in the world it certainly changed my world view. (...) trust in people is not the same anymore. You never trust, at least I never trust, and I'm sure it's happened to many other people, you don't trust that integrity will win."*
> *(Sofia, 25 years in the NHS)*

Sofia's cognitive perception about the world as a safe place and her trust in people has been disrupted and changed as a result of her work. Laura also explains how her views were changed after working with refugees who had suffered from multiple traumas.

> *"I don't really think the world is a just place anymore. (...) I do think it's made me [her work] more negative about the world (...) Before I used to believe the world was quite a fair place."*

(Laura, 30; 8 years in the NHS)

Other participants similarly found their views and perceptions of the world and/or belief systems had altered.

> *"It does affect my world views actually. Um, there are times I get very despondent about how cruel and horrible people are. Um, and how unfair things are and sometimes that can be quite depressing".*
> *(Nicky, 33; 10 years in the NHS)*

> *"The spirituality [changed] as well, starting to feel quite despondent about that. I think as I put in my thing over there, I am a Christian and you begin to actually think: is this really what it's all about? If that's what it's about maybe I don't want to be part of that."*
> *(Robert, 60; 15 years in the NHS)*

> *"I am a Christian and always have been. But it's very hard at times to, to reconcile the degree of suffering, you know, that people can go through."*
> *(Sofia, 25 years in the NHS)*

Here, participants disclosed an utter change in the way they see and perceive the world as a result of their work with people who have experienced trauma. Nicky oftentimes feels depressed with the cruelty in people and sounds very disappointed while sharing this. Similarly to her, Robert experiences feelings of disappointment towards his spiritual beliefs when challenges them through his work. Sofia finds it very difficult to keep her spiritual beliefs intact when realised the amount of pain people with trauma had to face and bear.

The participants demonstrated that the work in this area had a negative influence way beyond their work itself. Their beliefs about safety, the degree of cruelty in human nature and religious beliefs were all challenged by their experiences of other people's experiences of traumatic events. Continuing to the next subordinate theme, the social and relational impact on participants' will be addressed.

3.1.3 Social and relational impact

This theme explores the impact of traumatic disclosures on the psychologists' relationships with others in a social and personal context.

For a number of participants intrusions took the form of affecting their social life and personal relationships. Laura, who primarily has worked with refugees and survivors of war and torture, finds difficult to navigate herself around conversations, news or movies that their topic is related to her clients (e.g. war, racism).

Here, the participants express heighten sensitivities and values as a result of their experiences which impacting their working and social relationships.

> *"They [her friends] were saying something like quite racist (...) And I got really, really angry about that and then it made me think of this guy [her patient], the racial attack he had as well and I actually remember like getting very upset at that point. (...) And, and it was quite hard to almost contain that, like I actually had to take myself out of the situation."*
> *(Laura, 30; 8 years in the NHS)*

> *"People I used to really get on with I don't really anymore (...) And if someone's very racist I find it very hard to stay friends with them, I think that's probably changed as a result of this work."*
> *(Laura, 30; 8 years in the NHS)*

> *"Being met with absolute sarcasm (...) that kind of sarcasm from somebody who'd never seen a poor person in their life."*
> *(Sofia, 25 years in the NHS)*

Laura reveals that she has become sensitive to certain topics because of her clients' traumatic experiences and disclosures and that oftentimes finds herself in situations that she cannot contain her anger that is triggered by her surroundings. Laura's relationships have been affected and a number of them have been terminated as she has re-evaluated them because of her work with traumatised people. Sofia outlines the reaction of her colleagues the time she was protesting about the lack of financial support for clients. Her disclosure about the sarcastic reaction of her colleagues indicates a potential professional alienation towards her at that time. Sofia reveals here an important issue of disconnection between a number of staff in the NHS and clients' needs. Participants also described altered level of vigilance in relation to safety, even in their own neighbourhoods.

> *"When I go in [the area of the attack] I'm kind of looking around thinking "is it that person?" (...) [it] makes me kind of look at people and think "is that, you know, that's the person or...?", yeah, where as I would never have done that before that experience. (...) I felt a sense of horror (...) about what had happened, that someone could do that."*
> *(Maria, 36; 4 years in the NHS)*

> *"This [his patient's disclosure] left me with a deep unease about some areas walking around late at night. (...) it's left me with a bit of a dislike of some of the areas I work in. Which is ironic when we [him and his partner] were trying to buy a house a few years back (...) it looked like the only place we could afford to live would have been some of these areas. (...) so instead we moved forty-five minutes further drive away so that we weren't in this area."*
> *(Peter, 46; 19 years in the NHS)*

Maria here describes aspects of the experienced intrusions and social impact as a result of her work. After treating two of her female clients who were brutally attacked in an area that she works, Maria started experiencing certain type of intrusions. She experiences alterations in perception of sense of her safety as she no longer feels safe to go to certain places and she feels horrified about incidents where her clients were brutally attacked in a familiar for her area. After her clients' disclosures she started being nervous and suspicious of other people being a potential threat to her or aggressors when she goes to these areas. In the same line of thought, Peter feels scared and terrified to go in certain areas as a result of his client's disclosures.

The impact extended to fears for their families, particularly where abuse has been perpetrated on children.

> *"Sexual abuse in children, child abuse and that kind of thing, um, [I am] thinking about I've got a niece and a nephew, you know, kind of sometimes kind of lucky them being,*

you know, where and kind of think, you know: what's going on there?, um. So, yeah, I think it makes me maybe feel more unsafe"
(Maria, 36; 4 years in the NHS)

"There's also been ones that have been, um, about sexual abuse again, uh, that's because I'm a lady but they seemed to, um, affect you as well (...) I think about it quite a lot (...)"
(Maria, 36; 4 years in the NHS)

Maria reports experiencing persisting intrusions after working with victims of sexual assault and child abuse. She discloses that her clients' accounts made her fearful for her family's safety as a consequence.

The impact of dealing with trauma even extends to leisure time for participants.

"I would come home on a Friday, absolutely exhausted, dog tired, feeling like I've been drained of every last energy or spirit I had. And trying to enjoy a Friday night with friends and finding it hard to concentrate on it. (...) It does have a knock on your personal life, knock on effect on your personal life. So you, you know, it's, it's quite hard to unwind sometimes from those kind of situations. It's hard to come home and be fun and friendly and all you really want to do is just kind of be on your own for a bit and detox, fall out a little bit. (...) my friends or certainly my partner would not be at all interested in this [his working challenges]. I'm not even sure I wanted to talk about it with her. Cause I don't think she'd understand or know what to say. (...) Typical bloke strategy of being on your own."
(Peter, 46; 19 years in the NHS)
"I can't really, like, [stand to] watch scaring films, I don't like watching them at all. (...) I've had sort of thought about clients and thought about their personal stories of it and got a bit emotional (...) Yeah, that's why I've suffered."
(Laura, 30; 8 years in the NHS)

"I would never watch a film of torture. I would never do that; I couldn't face it because I'm sensitised to it."
(Sofia, 25 years in the NHS)

Peter’s work in the NHS with people who suffer from trauma has an impact on his personal life as sometimes he finds it hard to detach from his work. He also describes that because of his work he is no longer able to enjoy being with his friends. As a result, he sometimes prefers to isolate himself as he feels that neither his partner nor his friends would be interested to listening to him. This behaviour of *‘being on my own’* could potentially lead Peter to social isolation. Laura’s social interactions have also been affected as she cannot be involved anymore with her friends in certain types of activities. She reveals that she is no longer able to watch certain type of films because they bring intrusive thoughts and intrusive images of her clients’ horrific experiences. Laura here uses some powerful language as she feels that she has *suffered* a numerous time as a result of these intrusive symptoms. Similarly to Laura, Sofia gives an account of experienced alterations in her social activities as her film choices have been changed as she is no longer, like Laura, able to watch certain type of movies.

Psychologists dealing with trauma appear to be paying a high trauma for this type of work. There are suggestions of heightened potential for alienation from other people as a result of a clashing value systems, increased awareness of danger even in their own neighbourhoods and families, emotional exhaustion and avoidance of topics related to trauma. This directly connects with the next subordinate theme of coping mechanisms.

3.1.4 Coping mechanisms

This theme examines the ways the participants try to deal with the challenges they face at work with their clients who suffer from trauma through their coping mechanisms. In addition, this theme explores what participants’ immediate actions are during and after a challenging session and how they try to handle the immediate impact of the session on them. Sofia mentions how she copes when horrible traumatic disclosures are brought in the sessions by her clients.

Some people made active attempts to immediately treat themselves and process what they were hearing.

> *“I face right up to everything; I never avoid those situations. And in dealing with people with trauma I never avoid the difficulties, I don’t. (...) My coping strategy is never to avoid.*

> *(Sofia, 25 years in the NHS)*

> *"There were times when I remember I'd have to walk around before I could write the notes just to get the shock out of my head."*
> *(Sofia, 25 years in the NHS)*

> *"I need to just go for a walk out there down the road and get a can of Coke. I go out and just have a can of Coke."*
> *(Tom, 31; 10 years in the NHS)*

> *"Actually, when that [a traumatic disclosure] happens I need to do some mindfulness very quickly. (...) the way that I actually deal with it is to actually reflect it [back to the patient]."*
> *(Robert, 60; 15 years in the NHS)*

Sofia's determination of not avoiding the traumatic disclosure of her clients is her way of coping when facing horrific disclosures during sessions. Nevertheless, in numerous occasions where clients' disclosures are too horrible, she had to go for a walk before continuing her work. Tom also needs to go out of his office for a quick walk after hard sessions in order to be able to see the next scheduled client. Robert on the other hand finds reflection useful as well as a quick utilisation of mindfulness as a coping strategy to traumatic disclosures of his clients.

Others enlisted help to process their emotions.

> *"Sometimes I speak to my colleagues if a session's extremely, extremely difficult, um, for debriefing. But, you know, all of us will see extremely difficult cases so I don't want actually to be a burden on them."*
> *(Claire, 32; 8 years in the NHS)*

> *"Afterwards I did talk with, um, my colleagues about how that was and, um, and... I think I needed a sense of needing to offload it a little bit and not just be carrying it."*
> *(Nicky, 33; 10 years in the NHS)*

> *"Something that's been really helpful is, um, starting my own therapy actually and thinking about looking after myself better. That helps in that it gets me out of work on time and, um, and also helps me sort of, yeah, to deal with other things and my reactions and how I get into particular relationships with some patients."*
> *(Nicky, 33; 10 years in the NHS)*

When a challenging session ends, Claire mentions that sometimes she tries and speaks with her colleagues but because they face their own challenges as well, she does not always feel comfortable to go and speak with a colleague. Similarly to Claire, Nicky also speaks with her colleagues after a difficult session as a method of support. She then describes the importance of having her personal therapy in order to deal with her work's challenges and difficult situations. Here, Nicky underlines the importance of personal therapy for psychologists who work with clients who suffer from trauma, an issue often oversighted by both professionals and organisations.

Other participants used distraction as a way to cope with their experiences.

> *"But is [my coping strategy] to disassociate and to refocus on doing something quite constructive which is usually something very, very intellectual. Like I might go and write up some more research or I might go and, um, start reading something brand new, a different philosophy, a different way of thinking, stuff like that. So this is a type of escapism."*
> *(Robert, 60; 15 years in the NHS)*
> *"I do a lot of dancing. (...) I hang around a lot with my friends, I read a lot of literature, I compose poetry, I compose fairy tales for children. Um, I travel a lot."*
> *(Claire, 32; 8 years in the NHS)*

> *"If I'm feeling really drained [by work] probably my, um, default would be kind of fantasy TV just, you know, kind of get outside of the world."*
> *(Maria, 36; 4 years in the NHS)*

Robert mentions that he uses *'escapism'* in order to cope, distract and distance himself from his clients. Like Robert, Claire tries to switch off from work by finding ways to distract herself. Maria describes a desire and need to *'get outside of the world'*, which suggests that there is an accumulation of tiredness and overwhelming emotions that have not been resolved yet.

There was also evidence that participants dealt with their own trauma by deflecting it back to their clients.

> *"[I] slowed down and sat with it and reflected a bit of it back to the client that, um, this was a big deal."*
> *(Nicky, 33; 10 years in the NHS)*

And finally, there are participants who were able to switch off.

> *"When I leave here, I leave. Somehow I don't really think about patients (...) I'm sort of leaving and then I'm going home and I'm there."*
> *(Kelly, 41; 17 years in the NHS)*

Kelly believes that she easily detaches herself from clients when she is off of work. However, Kelly's reported easiness to switch off from work might suggest a level of avoidance.

The majority of the participants seem to have developed their own techniques and strategies of coping with the traumatic disclosures of their clients. The above quotations indicate that participants felt a need to have some way to process what they were hearing. This processing also takes time and a strategy that works for the individual. The psychologists all appear aware for the need to process this information and use a variety of strategies to achieve this.

3.2 Dealing with clients' traumatic disclosures in the National Health Service context

A superordinate theme that emerged across the nine psychologists interviewed was the importance and centrality of dealing with the traumatic disclosures of clients. This theme captures the way the participants described their cognitive, emotional and environmental experience of these interactions with their clients. Within this theme six subordinate themes were identified as having a vital role for psychologists to face, listen and treat their clients who suffered from trauma. This section will look at participants reported their experiences and accounts of (1) job expectations; (2) caseload; (3) sense of safety; (4) culture influence; (5) lack of support, and (6) suggestions to improve support in the NHS.

3.2.1 Job expectations

This theme relates to the changes in the participants' job expectations from initially when they started to work as psychologist to the present. The participants mentioned that they had certain expectations about their job as psychologists and they described the disappointment on how their expectations have changed over time.

Peter, who has 19 years of working experience in the NHS, mentions that he still enjoys the clinical work that he does but he emphasises the reasons his job expectations have changed and demoralisation that experiences in relation to it.

> *"Because pay has gone down so much and because caseloads have gone up so much, I feel much less valued in what I do. I feel like I've gone from being a specialist to being a kind of almost a receptionist, you know, like a drone. Um, to the point where I don't feel like, I don't feel I can competently say my future lies with the NHS because it pays so bad and the conditions have deteriorated."*
> *(Peter, 46; 19 years in the NHS)*

For Peter being appreciated and valued for his work is an important aspect. He strongly and bitterly feels undervalued as his salary does not reflect the amount and difficulty of work that he has to carry out. His words emphasise his negative emotions with the current situation as he characterises himself as a *'receptionist'* and believes that his professional future would be away from the NHS. Sofia is the participant who has the longest experience of working in the NHS with 25 years mentions that her job used to match her expectations and beliefs but she underlines the reasons it does not anymore.

> *"I think, uh, for many years it did, it increasingly it doesn't. Uh, the reasons why it doesn't now is that there's more of a tendency to be very protocol-based and to be, to act more like technicians than psychologists. And that doesn't match my beliefs".*
> *(Sofia, 25 years in the NHS)*

Sofia here expresses her disappointed that the NHS has become very protocol-based and she believes that as a result her role as a psychologist has been shrunk and minimised. Her choice of words (e.g. technicians) seems to suggest that Sofia is concerned that nowadays her job has been dramatically changed and has little to do with what it used to.

On the other hand, Maria is working in the NHS the last 4 years, the shortest period amongst the participants, and describes why her job does not match the expectations she had while she was on training.

> *"No, not at all. (...) it doesn't, because, um, you're quite sheltered I think when you're on training (...) when we came out, there weren't a lot of jobs available because of the recession (...) and then things changed in terms of people wanting to do very brief therapy. (...) CBT was very prominent. (...) in terms of freedom at my job that is something that can restrict freedom if it's not suitable for that client. Um, and another thing is the kind of, um, types of jobs that are out there and the timescale. (...) the timescale's probably the thing that's particularly, um, potent to me, I guess that's the thing that's stuck out for me the most cause sometimes it would be nice to work with someone for a longer period of time."*
> *(Maria, 36; 4 years in the NHS)*

Maria's description of the change of her job expectations highlights her experience of transitioning from a trainee to a professional psychologist. She expresses concerns about several restrictions that the NHS implies to psychologists (e.g. protocol-based therapies, timescale of sessions). Maria sees professional freedom and flexibility as an important and vital factor for her work as a psychologist. Following Maria, Robert with 15 years of working experience in the NHS, he seems to face similar issues with Maria at his current work that have changed his job expectations.

> *"Quite recently they [the Trust] have just changed it [his professional autonomy] as we're actually becoming quite a lot more prescriptive. (...) And that is about trying to manage, um, massive demand with limited resources. It did but it's not anymore [job matches his expectations]. So previously my, um, expectations were I'm an experienced clinical psychologist when I'm working with somebody, with one of my clients, um, I'm*

> *in the best position to know in working with that client what would be the best interest of that client. And I had absolute autonomy to make those decisions. But it's changed now and what they're changing now as they're saying "if somebody comes along with that particular diagnosis this is what you have to do". And that doesn't work for me at all".*
>
> *(Robert, 60; 15 years in the NHS)*

Similarly to others, Robert feels that current NHS' policies have circumscribed his professional role while at the same time undermine his professional judgement of his clients' best interests. In addition, he firmly believes that the lack of professional freedom to the minimum point causes dysfunctions in his work. Having eight years of working experience in the NHS, Claire agrees with Robert that the freedom that she has now is less than it used to be.

> *"You feel very controlled [laugh] in NHS because now they implement this policy, payment by results. (...) you feel controlled in terms of how many sessions you offer. (...) NHS are constraint on its resources. So, the control they exert on us is much bigger. (...) So, there is a lot of control. In terms of freedom... Not so much freedom".*
>
> *(Claire, 32; 8 years in the NHS)*

Claire's words and nervous laugh suggest that she is worried about the implementation of the new NHS's policies that make the psychologists' work more controlled by the Trusts. The lack of resources that the NHS is facing has as a result a dramatic increase in the applied control on psychologists' job. When she refers to her job expectations and beliefs Claire's response is emphatic.

> *"My expectations and beliefs, no (her work does not match them). Not in my current post. Because they promised me a really good supervision (...) and for the first three months I didn't have any. And, um, I was heading towards vicarious trauma. (...) I felt that everything was going under my skin (...) because I didn't have supervision. (...) they said to me "you will have trauma cases in the first few months but as the time progress you will have a more generic staff", and that never happened. They said they will train new people in EMDR but still this hasn't happened. Our manager is a little bit helpless. Isn't very inspiring. (...) she cannot contain her feelings. She gets very upset with things. So, um, no it's not the best environment".*

> *(Claire, 32; 8 years in the NHS)*

Claire was visibly upset while she was mentioning the inconsistencies in the promises she was given by her new job services. She seems to have struggled the first months of her new job as she was not getting any supervision and that had an impact on her as she felt vulnerable and exposed to clients' disclosures. Supervision and the absence of it is an extremely important aspect for psychologists' work and could be damaging for individuals if the absence is prolonged. Moreover, Claire points out how the working organisational environment could develop a heavy atmosphere when managers lack the skills to contain themselves and pass their negative emotions over to the rest of the team members.

The majority of the participants expressed that their job expectations have gradually worsen the last years due to a number of reasons: recession, NHS limited resources, reductions in salaries, lack of professional freedom, increase of control over their work, lack of supervision and/or support by their managers. The participants seem to be consumed by this deterioration of the NHS services and are unable to carry out their job in the way they used to. They convey a sense that this is an overwhelming transition for them and in some cases feel that what they do has nothing to do with a psychologist's job. During the interviews there was a sense of hopelessness by the participants and that the things are going to get worst. This relates to the next subordinate theme that explores the support systems aspect and its role in psychologists' working performance.

3.2.2 Support systems

This subordinate theme describes the available support that participants could seek in their services after a challenging session with a traumatised client.

Sofia reveals that she could not turn to her services for support as there was nobody to turn to.

> *"No, because there wasn't any to seek. You know, there was nothing to seek. (...) Um, so no, there was really nowhere, you had to find a way to, to resolve this yourself when you're in that situation."*
> *(Sofia, 25 years in the NHS)*

The situation that Sofia describes is concerning as it underlines that a number of psychologists, like Sofia, not only have to face overwhelmingly horrible disclosures by their clients but they also have to find a way to deal and cope with their emotions following these disclosures by themselves. This suggests that psychologists who have no support from their working place in these matters carry an emotional burden that if they do not find an appropriate way to deal with it will accumulate and potentially lead to VT with the effect and consequences described in the previous subordinate themes. Similarly to Sofia, Robert believes that seeking support as a psychologist within services is where the NHS falls down.

> *"There is no support for that. So I have to go and find my own support around that. Um, I spoke about it in the service but only insofar as being able to say to my colleagues "I'm extremely angry about a tragic story I've heard" but there was no further discussion. And no support around that at all."*
> *(Robert, 60; 15 years in the NHS)*

Robert strongly believes that there is no support to turn to within the NHS for staff who treat clients with trauma and might be affected by it. He sounds bitter and disappointed for the lack of support he experiences. Maria presents another reality that is present in the NHS services when it comes to supporting the staff.

> *"If I was really upset, I would speak to someone [a colleague] but I know I'm sure my supervisor would be open to me talking about it and my line manager is very good to pick up the phone. (...) Um, but if you've got someone to see it's not always possible to do that immediately. So you just kind of have to put it out of your mind."*
> *(Maria, 36; 4 years in the NHS)*

Maria discloses that she could potentially seek support within her service but because of the heavy caseload and schedule this is not always possible for her. The absence of staff support when needed can lead to emotional accumulation and therefore to more persistent effects of VT.

Some participants had access to supervision and wider support network. As Maria mentioned, Tom describes that he also seeks support through supervision.

> *"I have a number of different support networks which help me to deliver this kind of work. Supervision is one. (...) my friends as well. (...) It's a lot easier for me to disclose to them as there's no power differential as well of supervisor/manager relationship within your Trust."*
> *(Tom, 31; 10 years in the NHS)*

Tom's account suggests that he might not feel very comfortable in disclosing the effects of traumatic disclosures on him to his supervisor at work. Tom here underlines the important issue of power difference between the supervisor and the supervisee. He admits that it is easier to him to seek support outside of his service than inside of it because there is no hierarchy involved.

From participants' accounts it is evident that provision in regards to staff affected by VT symptoms in the NHS is minimal. This lack of supporting services within the NHS can potentially put the staff who are in contact with traumatised clients at higher risk of developing VT. It appears that psychologists make a distinction between the kind of support which they need to deal with individual disclosures of trauma and the kind of support which is generally available within the NHS in the form of staff support or group debriefing. This connects with the next sub-theme that explores the amount of cases that psychologists have to deal with daily and how it affects their working performance.

3.2.3 Caseload

This link to the previous themes that focus on the sense of participants feeling overwhelmed is reported as a result of the number of clients they have to treat in a daily basis. The amount of service users that needs to be seen by psychologists plays a vital role in their performance and in the quality of services they offer. In this theme the despair of the participants seems to increase as they do not feel that the described situation in the NHS will change in the near future.

The participants shared a particularly common observation amongst them that the number of clients they see is more than they can handle resulting and contributing to their emotional distress and physical exhaustion. In addition, cases of clients with traumatic experiences are very emotionally demanding and overwhelming as psychologists could face very graphic and extreme disclosures and they need time and space to digest each session; time and space that they do not have at present in the NHS. In addition, the amount of work for psychologists could be surcharged not only by the number of clients but in some cases by the number of sessions with a client. Peter describes his experience of his overloaded working schedule.

> *"I got better at not seeing too many people in one day cause some of these cases were so heavy and so draining. I was seeing three or four a day, or five on occasions, and it's just too much emotion. I personally couldn't cope with that, that level of clients. So, I was firmer with my boundaries. (...) I think that many clients can be very, very draining. Quite damaging".*
> *(Peter, 46; 19 years in the NHS)*

For Peter a heavy caseload has a great emotional toll on psychologists. He mentions that he could not cope with the number of allocated clients because of the high levels of emotional fatigue and exhaustion that he was experiencing. In an attempt to protect and safeguard himself from the accumulated burden Peter decided to change his professional practices. When Peter mentions that he sounds completely drained and exhausted. When Peter mentions that he sounds completely drained and exhausted.

Maria and Tom unravel how they deal with the reality of having to see for therapy too many clients with trauma.

> *"I try to space my clients out if they're quite tricky ones. Um, but that's not always possible. Um, so I would try not to have too many people who've got trauma on one day. Although that's not always possible".*
> *(Maria, 36; 4 years in the NHS)*

> *"I would look at my caseload, because I manage the caseloads as well, and trying to divvy them out to psychologists, including myself. I won't obviously give anybody all the trauma cases, would be stupid. Um, so basically I just try to divvy them out (...) spreading the workload basically between (psychologists)".*
> *(Tom, 31; 10 years in the NHS)*

Tom and Maria realise that the caseload they have to manage is more than heavy and cases of clients with trauma are multiplying, making the workload harder to manage. As a way to safeguard themselves, both Maria and Tom try not to have many trauma cases on their daily workload. However, Maria discloses that even if she tries to avoid having too many trauma cases per day that is not always possible due to the big number of untreated individuals.

For psychologists losing the enjoyment and motivation for work could lead to losing interest for the work itself which subsequently will result in the decrease of the quality of the NHS services. Nicky and Claire described their experience with their overloaded caseloads and reveal the impact on them.

> *"There is a vague caseload number, sometimes I feel like you don't have enough time to sort of digest things after sessions".*
> *(Nicky, 33; 10 years in the NHS)*

> *"I'm so motivated and very recently I wasn't so much because, um, I ended up with a massive caseload. I couldn't enjoy my job so much".*
> *(Claire, 32; 8 years in the NHS)*

Nicky recounts how her caseload does not leave any room for reflection of her thoughts and emotions. Having excessive loads could potentially lead to accumulative stress that would have an impact on the professional and personal life of the psychologist. Claire describes the loss of her motivation and enjoyment for her work as a result of her caseload. She sounds very distressed and helpless at this point as the tone of her voice suggests that she has no hope that the situation will improve anytime soon. Claire also goes on to highlight another factor that can further contribute to the difficulty to being able to manage a heavy caseload.

> *"I was affected a lot by my current separation from my partner as well. And I realised, you know, um, that this kind of job is much harder when your personal life is not ok".*
> *(Claire, 32; 8 years in the NHS)*

Claire underlines the cumulative stress of work and domestic and personal issues. She seems to be describing a sense of realisation here; a massive caseload could become unbearable if psychologist faces difficult issues, situations and adjustments in their personal lives. The emotional demand of having to treat many clients, of which many of them suffer from trauma, joint with an unstable and difficult period in life outside of work could be a combination that potentially would lead the psychologist in an emotional deadlock.

In summary, the majority of the participants described their common experience of having a heavy caseload, how they try to manage through it and how this has impacted them. This theme illustrates the feeling and sense of despair that was present while participants underlined the challenge they face nowadays: that of having to treat too many clients. This builds up the next subordinate theme that explores the sense of safety of the participants when they work with their clients.

3.2.4 Sense of safety

The present theme refers to the perception of how safe by the participants while working in the NHS, often with high risk population. Tom underlines in details how safe he feels working at his current NHS post.

> *"Ha! Feeling safe. Oh God we're not safe! We're not safe here. Um, we know what we're compromising when we come in here day in and day out as NHS employees, we know we're walking into an unsafe environment."*
> *(Tom, 31; 10 years in the NHS)*

Tom feels totally unsafe at his working place and admits that he has come in terms with it as part of his job. Then elaborates more to the situation that he has to face in daily basis.

> *"Our panic button is there. I'm not going to be able to reach it. Only I know when I push that button as well, it is not going to go and alert people who are gonna come and help me. (...) We've had SUIs [serious untoward incident] happen here in terms of people who've murdered people, people have taken their own lives as well. We've had people turn up with knives here."*
> *(Tom, 31; 10 years in the NHS)*

His account illustrates a rather intimidating and uncomfortable environment for him in order to be fully concentrated on carrying on his job. Other participants also expressed concerns about their environmental safety; safety depends on the service they work at or the community area they serve.

> *"There are different levels of safety I feel (...) There are some rooms where I do feel safe because we have an alarm (...) They don't all have an emergency button (...) So I do feel relatively safe, more safe in some places than others."*
> *(Maria, 36; 4 years in the NHS)*

> *"[I] feel a bit less safe and a bit more safe at the same time compared to being on the wards. Generally, clients are less risky [in community services] but you don't, yeah, you might be more on your own and there might not be as quicker response as you'd have on a ward."*
> *(Nicky, 33; 10 years in the NHS)*

Maria discloses that her safety feelings is relative to which room her sessions take place. Nicky, who now works in community services, describes mixed feelings of safety compared to her work in hospital wards. Following Maria, Claire describes how safe she feels at her working environment.

> *"There have been moments that I haven't felt safe in the NHS. My child soldier clients because they have killed many people, as you can imagine, they can flip very easily into a bully attack mode. As soon as you challenge them you can see a bit of rage in their eyes. (...) sometimes I don't feel really, really, um, safe."*
> *(Claire, 32; 8 years in the NHS)*

She reveals that working with high risk clients in the NHS causes her feelings of unsafety. Then Claire goes on and describes the stressful environment she works at. The experiences of participants highlight the stress which they face of different kind of risks apart from the environmental risks. There is the direct risk from clients to the psychologists or to themselves.

> *“I had another client who has been very suicidal and, um, he said to me that he has a knife with him all the time in case like his suicidal thoughts are really bad so he can stab himself. And sometimes I was thinking that probably something like that can happen within the room. (...) I feel that I need, um, the risk button with me otherwise it can be quite tough.”*
> *(Claire, 32; 8 years in the NHS)*

Claire is exposed to a stressful and overwhelming working environment in which she has to often consider her own and her clients’ physical safety. That suggests that Claire often works under extreme pressure and constant fear in her professional environment. Sofia then admits that her feelings of safety at work are not always justifiable.

> *“I’ve always felt safe to a point that I've often questioned when whether I feel disproportionately safe in proportion to the environment that I’m in. (...) I've been hit like other people have, I’ve been attacked on occasions, um, as most people in the NHS have.”*
> *(Sofia, 25 years in the NHS)*

Sofia here discloses that she feels safe although she has been physically attacked by clients in her working environment more than once. She also mentions that according to her experience most people in the NHS have similar experiences of being attacked by clients.

Feeling safe at the working place is a major issue for any professional. It appears that psychologists who deal with trauma fear risk of harm to themselves and/or to the client in environments that are unsafe and this can only add to the stress of these psychologists and the need to feel competent to manage in such situations. This theme explores the feelings of safety that participants have while working and revealed that a number of them feels unsafe at their working place, but they have to carry on working as there is no other option. The potential psychological burden that this constant feeling of lack of security could cause is an important issue that needs to be taken seriously.

3.2.5 Culture influence

The theme of culture influence was described by the participants in the context of importance in their line of work. Culture influence refers to the different cultural backgrounds that many of their clients belong to and how that affects their therapeutic approach. The working experiences of psychologists have their own part in how willing they will be to study other cultures and guide themselves through them.

While working with population of different cultures there is the possibility for psychologists to feel exposed to an unknown behaviour or way of thinking. Moral behavioural and cognition could act differently than psychologists expect. Cultural awareness often involves understanding of the rationalisations and biases that affect moral decision-making; even decisions and behaviours that contrast our own ethics and values.

Peter discloses how hard was at times for him to work with people of different cultural background as his ethics were challenged by his clients.

> *"The area I was speaking about was a big kind of cultural thing about there's lots of drugs, lots of drink, lots of wife beating and lots of child beating, lots of sexual harassment sexual abuse. And it's hard not to let your ideals slip away when you see it going all along. (...) And it leaves you feeling like the problems here are so much more endemic than the way this one person thinks. The way this one person thinks is a reflection of the way everyone else on the street thinks and the culture in which this is all a norm and allowed and this is a very kind of misogynistic and abusive environment basically. (...) It's not the cultures themselves are particularly bad. This applies to all cultures (...) With every culture there are better bits and worse, worse bits I suppose".*
> *(Peter, 46; 19 years in the NHS)*

For Peter is hard to manage and face the worse parts of his clients' different cultures and that is evident and reflected in his powerful description and choice of words. It is particularly hard for him to oversee the ethical challenges and proceed with the therapeutic work that his clients need. Moreover, he discloses that his work motivation has been changed as a result of these challenges.

> *"My, my joy of working with these people that I used to get is now a kind of temper cynicism. I still hope that someone unusual will respond and will listen and will make changes but I'm more than aware that it's quite likely they won't".*
> *(Peter, 46; 19 years in the NHS)*

Peter sounds bitter and tired with the situation that he often faces with his clients. Sofia describes a different kind of culture which impacts upon her work. In this case she describes the impact of some ethnic religious belief systems on staff attitudes on clients with trauma.

> *"These unfortunate people were coming in tortured to bits, traumatised to bits and there were some strange attitudes among the staff springing from their own kind of cultural beliefs like "it's a legacy of a former life he brought it on himself", "it's a result of sin" and so very little sympathy and understanding or actual care for those people. I found that quite shocking".*
> *(Sofia, 25 years in the NHS)*

Sofia points out the urgent need for the NHS to invest more in its staff cultural awareness and sentience. She seemed shocked when she was describing her experience by the lack of emotional support and understanding the staff showed towards the clients with trauma. Sofia continues by describing why being cultural aware as a psychologist is an important factor in treating clients who suffer from trauma.

> *"I think if there were good methods in the field of dealing with torture, which to some extent there are now, um, but they're still not that culturally sensitive. Even today if you look at the NICE Guidelines: "Oh yes, you must provide something culturally appropriate", that's easier said than done. Nobody knows all the cultures. It takes a lot of study to know what culture and to know what's relevant. (...) So these things require a lot more investment and, you know, a lot more dedication (...) [We are] forcing people still into Western frameworks and we haven't looked carefully enough with those other cultures".*
> *(Sofia, 25 years in the NHS)*

Sofia feels that the NHS has not invested in making its staff culturally sensitive and aware in order to update their knowledge in approaching and/or treating people who suffer from trauma. Familiarising healthcare professionals with different cultures could result in the betterment and improvement of available services for clients who suffer with trauma. She believes that services can not apply the same treatment for trauma to everyone as their cultural background and belief systems need to be taken into account. Unfortunately, this still depends on each psychologist curtesy and willingness to expand their professional training and knowledge. Claire points out how important it is for her professional development and practice her own studying of other cultures.

> *"What has helped me a lot it was reading a lot about their (clients) cultures. (...) So reading about the culture and learning from the clients it has been really of paramount importance in my practice. (...) So I remember one day I had a client who said "Claire I feel so many cockroaches in my brain". And at that time, I felt that the client was psychotic, "what is cockroaches?". And was Chinese and this means that has a very bad headache. So, you need to learn a lot of things about the culture".*
> *(Claire, 32; 8 years in the NHS)*

Claire is addressing the need to become culturally competent by personal reading and professional development. For Claire reading about the culture of her clients means good practice as it has helped her to understand them better and in-depth and provide to them better therapeutic psychological services. If Claire was not culturally aware the treatment plan might have been completely different and, in that case, inappropriate for her client. Being culturally aware is a challenge that the NHS faces nowadays and needs to be addressed as its absence has an impact to the provided services.

People from cultures outside of the UK might have a different perception and understanding of mental health or the experience of trauma which could lead to a different therapeutic approach by psychologists if they are culturally aware. Laura enthusiastically describes her experience and gratification of working with people from different cultures and underlines what is particularly interesting for her.

> *"I really like working with people from different cultures. So, I really like, um, trying to understand their perception of what they've come to and how they view mental health and, like perhaps, how that's impacted on them. (...) the impact that collective traumas like war or, I suppose, torture (...) And think about how it impacts on someone and then how also the move from a different country to the UK and then their expectations in the UK and what it's actually like here and all these multiple layers of things that they've*

> *been through in their lives. I think it's quite interesting just to work with them because you see how that could impact on people".*
> *(Laura, 30; 8 years in the NHS)*

Laura highlights that by appreciating the positive cultural beliefs of others the psychologist can see and help develop post-traumatic growth. This is a parameter that is not very often lighted and taken into account about clients and the extra struggle that being in an unknown country brings with it. As Laura describes, there are multiple layers of their trauma that psychologist need to be prepared to unfold them. Laura also explains what stroke her of her working experience with this population.

> *"But then also quite often they have very positive beliefs as well. I mean literally like post traumatic growth but lots of positive beliefs that the world still or, um, things that really help them throughout life which is why they're still here and you also see the real strengths and resilience they have in them. So, I think that's the sort of group I really like working with".*
> *(Laura, 30; 8 years in the NHS)*

Laura here underlines the positive beliefs and view of the world and life that this population often has despite their experienced trauma and hard-life situation. Their will to live sometimes leads to a positive psychological change experienced as a result of adversity and other life challenges in order to rise to a higher level of functioning; a change very similar to post-traumatic growth.

This theme portrays the relative isolation which some psychologists feel as they try to behave in a culturally competent way in a multicultural work context where belief systems about the cause of trauma might not be consistent with their own. This is potentially an isolating factor for some psychologists. In addition, this theme portrays a less mentioned hard reality for psychologists in the NHS: the different cultural background of many clients with trauma and the lack of cultural awareness among the staff that adds to the difficulties that psychologists have to overcome in order to offer their services.

3.2.6 Considerations of improving systems

This last subordinate theme demonstrates the multi-laired complexities of dealing with trauma in the NHS context. The issues of heavy caseloads, time to reflect, adequate training, adequate support, lack of time for necessities such as reflection, continuing professional development (CPD) and even lunch, were raised by the participants.

The burden of heavy caseloads is reflected on participants' accounts as they underline the need for a lighter schedule.

> *"We're seeing so many clients back to back that it's just one massive misery by the end [of the day]. Um, so I, I think it's important not to overwork staff working with very difficult complex clients."*
> *(Peter, 46; 19 years in the NHS)*

> *"The NHS in general could give us more resources. [laugh] That would be great, to have more people, more clinicians to be helping with the overwhelming workloads that we have. Cause that's the main issue at the minute I think, there's just so many clients and so few resources."*
> *(Laura, 30; 8 years in the NHS)*

Peter and Laura point out the reality of heavy caseloads and how overwhelmed they are with this unavoidable situation. Peter graphically describes the situation as '*massive misery*' for psychologists while Laura suggests that the NHS could provide more resources to its staff as there is an increasingly high service demand nowadays

Overloaded caseloads leave no space for psychologists to process their emotions and thoughts after the end of each session. Because of the sense of overwork participants say they do not have time for reflection.

> *"We don't have any spaces anymore where we can reflect (...) I think this is really, you know, it's really missing, um. (...) there is not enough place to, you know, think about ourselves"*
> *(Kelly, 41; 17 years in the NHS)*

> *"[We need] more time to think after sessions, um, because there is a vague caseload number, sometimes I feel like you don't have enough time to sort of digest things after sessions. (...) more time and space to reflect on what's really just happened."*
> *(Nicky, 33; 10 years in the NHS)*

Both Kelly and Nicky emphasise to the importance of reflective space between sessions and the absolute absence of it nowadays in their working environments as there is not enough time. That could result in the accumulation of overwhelming negative emotions as psychologists have nowhere to turn for alleviation and support. Participants disclose a lack of preparedness to undertake this work in the first place. Participants also pointed to the lack of preparedness for this kind of work.

> *"The way the courses are set up it's impossible to learn trauma work"*
> *(Tom, 31; 10 years in the NHS)*

> *"We didn't get any EMDR training for example, and that seems to be something that's, um, relevant."*
> *(Maria, 36; 4 years in the NHS)*

> *"I'd really like to do some training and working with trauma. Um, I think I felt a bit under-equipped in terms of my training."*
> *(Nicky, 33; 10 years in the NHS)*

Tom mentions that the training courses of Psychology cannot provide a proper trauma training at present. Maria and Nicky also refer to their own experience of lack of trauma training they had before starting to see clients. In addition, Claire points out another issue she faces in regards to training.

> *"To allow us to do our CPD [continuous professional development] days. (...) we don't even have time for that. Um, they say we need to have six CPD days during the year and sometimes we don't have even time to do the CPD days because they want us to work. So to organise more in-house training for us. To pay for our training"*
> *(Claire, 32; 8 years in the NHS)*

Claire here describes that nowadays she does not have time to do her CPD due to the amount of work. In addition, sometimes she cannot do the requested CPD because at the same time the NHS wants her to work instead. She also mentions the need for more in-service training which would be covered by the NHS and not by the psychologists themselves. Continuing, it appears that even basic biological support is sometimes absent. Laura mentions another practical issue which is of utmost importance and many people oversee.

> *"To make sure we take lunch breaks I suppose which is something that no one really does."*
> *(Laura, 30; 8 years in the NHS)*

Lunch breaks are very important for any professional and everyone is entitled to one no matter the amount of work. Laura illustrates a situation that she and her colleagues do not always have this entitlement due to heavy caseloads. Participants underline the need for appropriate within service support for themselves.

> *"I should have been able to walk out of that session straight to another professional who would have helped me to contain the story [of the patient]"*
> *(Peter, 46; 19 years in the NHS)*

Robert discloses here the importance of a professional within the NHS who would be available and deal with psychologists' emotional and physical reactions of their clients' traumatic accounts. Some participants feel that the support for psychologists needs a corporate response which includes the role of a psychologist to specifically support staff.

> *"There should be a staff psychologist who deals with those things, you know, have somebody who actually also has a role in staff advocacy. With regard to trauma sustained at work I do think we actually need specialists in the areas and then people would go back and be productive again."*
> *(Sofia, 25 years in the NHS)*

Here, Sofia agrees with Peter that there is great need for trauma specialists to be employed by the NHS and whose job would be to specifically assist and treat professionals who sustained trauma at their workplace. Otherwise, if the situation remains unattended the quality level of provided service can potentially decline as more negative emotions would be accumulated and symptoms of VT would be more persevering. The complexities of dealing and treating severe trauma within the NHS are multi-layered, significant in their impact and deserving a discipline wide and corporate/organisational response.

In this theme participants express their exhaustion as a result of a heavy unmanageable caseload and the need for this situation to change. The overwhelming workload overlaps with the need for space for reflection between sessions that participants mention. This need could be managed if there were appointed specialists within services who would know how to treat distress, anxiety and trauma sustained at work. Furthermore, participants describe a lack of trauma training and the importance of this type of training to be available to psychologists at any point of their careers.

4.0 DISCUSSION

4.1 Overview of the results based on the emerged themes

The present study extends the knowledge of the impact of exposure to client's trauma in psychologists working in the NHS as the findings underline the effects of this exposure on psychologists. The data of this study produced two different superordinate themes. The first theme that emerged reveals the effects of clients' traumatic disclosures in the participants and their influence on psychologists' mental and physical health, personal and professional relationships, and belief systems. In addition, it showed the coping mechanisms that participants have utilised in an attempt to continue with their work and life. The second theme highlighted the ongoing organisational issues that participants face in daily basis and make them susceptible and vulnerable in the development of VT. In the second theme the participants particularly referred to their job expectations in the beginning of their careers and nowadays, the availability of staff support systems within the NHS services, the caseload they have to deal with, the sense of safety they have when working and the importance of cultural awareness when treating clients. In addition, they raise important issues (e.g. lack of time to reflect, adequate training) and offer suggestions for future improvements.

The first superordinate theme entitled *'The impact of clients' traumatic disclosures on the psychologist'* describes the symptoms that participants experienced as a result to the traumatic disclosures of their clients and produced four subordinate themes.

The first subordinate theme is entitled *'Psychological and physical reactions'* and reveals the level of impact of clients' traumatic accounts on psychologists. Consistent with existing literature the participants have experienced emotional detachment with their clients (Sui & Padmanabhanunni, 2016), cynicism (Sui & Padmanabhanunni, 2016; Jirek, 2015; Jankoski, 2010; VanDeusen & Way, 2006; Arnold et al., 2005), feelings of uselessness (Sui & Padmanabhanunni, 2016; Finklestein et al., 2015; Barrington & Shakespeare-Finch, 2014), feelings of guilt (Hartley, Wright, Vanderspank-Wright, Grassau, & Murray, 2019; Sansbury et al., 2015; Shannon et al., 2014; Benatar, 2010; Doherty, MacIntyre, & Wyne, 2010), burnout (Dombo & Blome, 2016; Raunick et al., 2015), nightmares (Maguire & Byrne, 2017; Sui & Padmanabhanunni, 2016; Finklestein et al., 2015; Jirek, 2015; Raunick et al., 2015; Barrington & Shakespeare-Finch, 2014; Barrington & Shakespeare-Finch, 2013; Pistorius et al., 2008), intrusive thoughts (Quitangon, 2019; Lee, 2017; Maguire & Byrne, 2017; Sui & Padmanabhanunni, 2016; Finklestein et al., 2015; Raunick et al., 2015; Barrington & Shakespeare-Finch, 2014; 2013; Pistorius et al., 2008), intrusive images (Maguire & Byrne, 2017; Sui & Padmanabhanunni, 2016; Finklestein et al., 2015; Hernandez-Wolfe et al., 2015; Raunick et al., 2015; Barrington & Shakespeare-Finch, 2014; Shannon et al., 2014; Barrington & Shakespeare-Finch, 2013; Mailloux, 2014; Pistorius et al., 2008; Schauben & Frazier, 1995), and strong emotional and physical reactions (e.g. muscle tension, churning stomach, heaviness, crying, feelings of sickness and angriness) (Lee, 2017; Sui & Padmanabhanunni, 2016; Finklestein et al., 2015; Sansbury et al., 2015; Barrington & Shakespeare-Finch, 2014; Barrington & Shakespeare-Finch, 2013; Iliffe & Steed, 2000). In this theme participants expressed an accumulation of experienced symptoms that leads or has already led them to overwhelming emotions or physical reactions. The reported symptoms in many cases were experienced even months after the psychologists have listened to a particular traumatic disclosure and could be very persistent. The exposure to repeated traumatic disclosures could potentially impact specific physiological stress responses (e.g. high blood pressure, increased heart rate) (Sui & Padmanabhanunni, 2016; Shannon et al., 2015; McFarlane, 2010). In long term this could result in further physical pain, migraines and gastro-intestinal issues (Sui & Padmanabhanunni, 2016; Sansbury et al., 2015; McFarlane, 2010). In line with other studies, this theme also demonstrates that psychologists who are exposed the most to clients' traumatic accounts have an increased risk in developing VT compared to the ones who are less exposed (Raunick et al., 2015; Ben-Porat & Itzhaky, 2009; Brady et al., 1999; Saakvitne & Pearlman, 1996; Pearlman & Mac Ian, 1995; Schauben & Frazier, 1995). In contrast to this result, Way, VanDeusen, Martin, Applegate and Jandle (2004) reported that therapists with shorter exposure to survivors of sexual abuse experienced greater intrusions and disruptions than the ones with longer exposure.

The second subordinate theme that emerged is entitled *'Questioning belief systems'* and highlighted the way the belief systems and world and spiritual views of the participants were challenged, disrupted and modified by the traumatic accounts of their clients. Participants reported substantial changes in the way they see the world as most of them no longer believe that the world is a safe and kind place to live. Trust in others has also been affected as participants reported difficulties in placing their trust to other people as a result of the horrible experiences of their clients. Moreover, the participants find it hard to keep their religious faith intact and expressed their disappointment as it is difficult for them to accept and reconcile with the level of suffering in the world. In line with CSDT, these results suggest strong alterations and disruptions in participants' frame of reference which could lead to distress, confusion in meaning-making process and life purpose, difficulties to maintain spiritual connection, and even existential crisis (Pearlman et al., 2014; Pearlman, 2013; Pearlman & Saakvitne, 1995). Disruptions in the sense of trust could result in difficulties in forming healthy and trusting attachments, suspicion and/or disappointment in others (Miller et al., 2010). Healthy attachments with others could contribute to self-capacities and subsequently to the person's ability to maintain their inner balance (Pearlman, 2013). Other studies showed similar disruptions and changes in people's worldviews, spirituality and trust in others (Long, 2020; Sui & Padmanabhanunni, 2016; Jirek, 2015; Barrington & Shakespeare-Finch, 2014; Miller et al., 2010; Ben-Porat & Itzhaky, 2009; Pistorius et al., 2008; VanDeusen & Way, 2006; Iliffe & Steed, 2000; Schauben & Frazier, 1995).

The third subordinate theme is entitled *'Social and relational impact'* and refers to the effect of clients' traumatic disclosures on participants' social life, professional and interpersonal relationships. The results show that participants' relationships have been greatly affected as they report estrangement to people who previously were considered friends due to re-evaluation of their relationship, alienation from work colleagues, lack of enjoyment while being with others and isolation from significant others. In addition, participants experience disruptions in sense of safety as they feel less safe and more fearful for themselves and their families. They also find it hard to engage in leisure activities (e.g. watching movies) with others, a component which could potentially lead to further social isolation. Similar results have been documented in the literature (Sui & Padmanabhanunni, 2016; Ben-Porat & Itzhaky, 2009; Pistorius et al., 2008; Iliffe & Steed, 2000). *Social isolation* describes the insufficient quality and quantity of a person's social relationships with others (Zavaleta, Samuel, & Mills, 2017). Maintaining healthy social relationships increase quality of life and it is of utmost important for people's physical and psychological well-being as feelings of social isolation could have a great negative impact on health (Cacioppo & Cacioppo, 2014; Stiglitz, Sen, & Fitoussi 2009). Literature shows that social isolation results in higher risk of morbidity and premature mortality (Cacioppo, Cacioppo, Capitanio, & Cole, 2015; Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015; Cacioppo & Cacioppo, 2014;), harms mental health (Rohde, D'Ambrosio, Tang, & Rao, 2016) and could influence the development of depression (Tomita & Burns, 2013). Holt-Lunstad et al. (2015) suggest that social isolation should be considered as a risk factor for mortality similarly to obesity, substance abuse, access to healthcare, sexual behaviour, mental health, injury, violence, physical activity, immunisation and environmental quality.

The fourth and last subordinate theme within the first superordinate theme is entitled *'Coping mechanisms'* and presents the mechanisms that participants have adapted in order to cope with the stressors they face at work as a result of clients' traumatic disclosures. The findings suggest that participants have incorporated a number of different coping strategies and techniques in order to deal with work-related stress. A number of participants report that they need time to calm and/or reflect after each session in order to take in clients' horrific accounts, when others try to use mindfulness techniques as a mean to balance their emotional reaction and reduce their stress. Some participants reveal that they try to speak with their colleagues after a difficult session as they feel the need to offload, while others find that personal therapy helps them. In addition, a number of participants has adopted avoidance and/or distraction as strategies to cope with clients' traumatic disclosures. Coping mechanisms are considered as a cognitive and behavioural effort that aims to control, reduce or tolerate stressors and it is orientated towards a positive adaptation to external reality related to mental health and well-being (Crasovan, 2014). It is considered as the active process by which the person with the assistance of their self-esteem and motivation copes with a stressful situation and manages to control it (Crasovan, 2014). Therefore, the adapted coping mechanisms of psychologists is of utmost importance as it could either reduce the work-related stressors and anxiety (positive coping strategies) or increase them (negative coping strategies). Positive coping mechanisms among others include seeking emotional and social support and activities that promote physical and spiritual well-being (Branson, 2019; Lee, 2017; Tabor, 2011; Pistorius et al., 2008; Way et al., 2004; Iliffe & Steed, 2000; Schauben & Frazier, 1995). On the other hand, negative coping mechanisms include avoidance, isolation, withdrawal and substance and alcohol misuse (Cohen & Collens, 2013; Newell & MacNeil, 2010; Pistorius et al., 2008; Way et al., 2004; Baird & Jenkins, 2003; Schauben & Frazier, 1995). Literature suggests that greater VT effects are positively associated with negative coping strategies (Way et al., 2004) and that positive coping mechanisms act as protective factors, are associated with lower levels of emotional distress and result in fewer VT symptoms (Grundlingh et al., 2017; Schauben & Frazier, 1995). Brady et al. (1999) highlight the paramount significance of positive coping strategies and in particular of self-awareness, peer support and self-care by therapists who are constantly exposed to clients' traumatic accounts. Positive coping mechanisms are important not only for the well-being of the psychologist but also for the quality of the provided service to their clients.

The second superordinate theme that emerged is entitled *'Dealing with clients' traumatic disclosures in the National Health Service context'* and reveals participants' cognitive, emotional and organisational experience as well as consequences of being exposed to clients' traumatic accounts. This superordinate theme produced six subordinate themes.

The first subordinate theme that emerged is entitled *'Job expectations'* and describes the changes and alterations in participants' job expectations during the course of their job. The results strongly suggest that participants' initial expectations when they started to work in the NHS have not met anymore. The majority of the participants report their disappointment about unmet expectations at their work and their belief that this situation will not change in the future. Interestingly, participants with longer experience in the NHS reveal that in the beginning of their careers their job used to match their expectations but it does not anymore. On the other hand, participants with less years of experience disclose that their job never matched their expectations. Experience among participants spans from 4 to 25 years with mean experience being 12.8 years. Some participants feel devalued by the NHS as their salary does not mirror the amount of work they produce. Participants also report that lack of professional autonomy and freedom in choosing treatment plans and therapeutic approaches for their clients, less organisational flexibility, oftentimes absence of supervision and negative emotions among team members play a vital role to their job and further organisational disappointment. Research shows that unmet job expectations could result in emotional exhaustion (Proost et al., 2012; Lee & Ashforth, 1996), increased work-related stress (Ng & Feldman, 2014), frustration

(Worsley et al., 2009; Houkes, Janssen, de Jonge, & Bakker, 2003), anxiety and anger (Worsley et al., 2009), withdrawal (Houkes et al., 2003) and increase in turnover (Proost et al., 2012; Houkes et al., 2003). Positive future expectations could decrease the levels of emotional exhaustion and job dissatisfaction due to unmet job expectations, while negative future expectations could further increase them (Maden, Ozcelik, & Karacay, 2016). The results of the current study show that participants have great concerns about the present situation in the NHS and express negative future expectations and no hope of future organisational improvements. This is an important aspect for consideration as Meng, Zhang, and Huang (2014) suggest that employees' job expectations and job satisfaction have a positive relation with the perceived organisational health. Furthermore, Irving and Montes (2009) report that when employees' job expectations are met the level of job satisfaction is high. Subsequently, met job expectations and high levels of job satisfaction could result in amelioration of services.

The second emerged theme titled *'Support systems'* reveals the organisational support that is available to participants in order to deal with challenging therapeutic sessions. Here, the results show a great lack of available organisational support by the NHS to the psychologists as they report that there is no specific service within the NHS for them to turn to and seek support in regards their experienced symptoms after exposure to clients' trauma. In addition, participants underline that their overwhelmingly heavy working schedules make it hard for them to even discuss their concerns with their colleagues. A number of participants reveal that they try to address their strong emotional and/or physical reactions to clients' traumatic disclosures during supervision. Though, due to power difference and hierarchy they do not feel comfortable to fully disclose the full effect of clients' accounts on them and as a result they feel better to seek support outside of the NHS. Supervision in the NHS is mainly focused to individual client cases, employees' performance and organisation's needs and objectives (Care Quality Commission, 2013). Although, employees' reflection and continuing development needs should be part of the supervision as suggested (Care Quality Commission, 2013), the results of the present study show that this is rarely achievable due to the lack of time. Moreover, another issue that needs to be addressed is if there is adequate preparedness and expertise that supervisors possess in the field of work-related trauma in order to provide the right guidance to their supervisees who experience symptoms of VT. The results underline the need for the NHS to promote work balance and flexibility in employees' schedules. Impact of exposure to clients' trauma requires organisational recognition, allocated time and space, expertise support and a feeling that sharing reaction resulting from contact with clients is both encouraged and allowed (Dombo & Blome, 2016; Osofsky, 2011; Bell, Kulkarni, & Dalton, 2003). The need and importance of strong organisational support structures for professionals who are exposed to clients' traumatic disclosures has been highlighted in other studies as well (Ireland, 2018 & Huxley; Lee, 2017; Molnar et al., 2017; Dombo & Blome, 2016; Finklestein et al., 2015, Pistorius et al., 2008). Changes in organisational systems though could be a slow and long process (Dombo & Blome, 2016).

The third theme that emerged is entitled *'Caseload'* and highlights the struggle of participants to deal and keep up with the large number of allocated clients. All of the participants report that they have to face an overloaded, heavy and oftentimes unrealistic caseload that has a tremendous effect on them. Some of the participants try to safeguard themselves by cutting down the trauma cases they see on daily basis but this is not always possible due to the high volume of clients who face trauma. Also, not every participant is in position to cut down their caseload. As a result of their extremely heavy caseloads and exposure to clients' traumatic accounts, psychologists report feeling emotionally fatigued, exhausted and drained, accumulated stress and emotional burden, loss of work enjoyment, loss of work motivation and hopelessness. These results are in line with previous literature that shows that heavy caseloads could further influence the development of VT (Pirelli et al., 2020; Andahazy, 2019; Quitangon, 2019; Finklestein et al., 2015; Barrington & Shakespeare-Finch, 2014; Dunkley & Whelan, 2006; Brady et al., 1999; Schauben & Frazier, 1995). Realistic and manageable caseloads can make a significant difference in a psychologist's well-being, general work effectiveness and ability to deliver quality services (Child Welfare Information Gateway, 2016). On the other hand, heavy caseloads could lead to an increase of staff turnover, burnout, organisational costs and a decrease in quality of services and job satisfaction (Social Work Policy Institute, 2010; Carayon & Gurses, 2008).

The fourth subordinate theme is entitled *'Sense of safety'* and underlines the perception of safety participants feel in their NHS services. It is evident from the results of this study that the majority of the participants feel unsafe in their working environment. The psychologists reveal that they have to work under constant physical risk as they have been attacked numerous times by clients and they have witnessed attacks on other staff; they have witnessed situations where clients carried dangerous assault items with them (e.g. knives) and situations where clients committed suicide; and they also report that staff has been murdered in their service. Not every psychologist working in the NHS faces these incidents, but these incidents are common in services who treat high risk clients. The participant with the most working years in the NHS (Sofia, 25 years) draw on her experience and reports that most of the NHS staff has experienced physical attack in their working environment. These results portray an, oftentimes, overlooked and difficult situation for the staff to manage in the NHS. The sense of safety is a very important work-related aspect because the standard of patient care that can be delivered could be compromised if the professional feels that they are at risk (Dekker, 2011). Literature suggests that the lack of perceived workplace safety could result in increased turnover and it is also extremely challenging and has negative effects on employees and influences the presence of VT symptoms (Horwitz, 2013; Woolhouse et al., 2012; Bell et al., 2003). It is of utmost importance for organisations to provide safe working environments and have clear action plans and policies in place in order to deal with emergency and difficult situations with clients. Providing a safe working environment could increase the overall quality of services and lead towards a healthier organisational environment for both employees and clients (Bell et al., 2003).

The fifth theme that emerged is entitled *'Culture influence'* and describes the importance of being culturally aware in order to properly engage and approach therapeutically clients of different cultural backgrounds. The results show that participants face ethical challenges, decrease in their work motivation and distress due to colleagues' inappropriate behaviour towards survivors of trauma with different cultural backgrounds. In addition, they report that there is a service training gap of cultural awareness for staff and that is why participants try to independently enrich their knowledge and develop their awareness of other cultures. Interestingly, some participants reveal that witnessing the strength and will of a number of their clients to overcome their horrific traumatic experiences adds to their work motivation. Working with people from other countries who suffer from trauma, often complex trauma, requires different professional psychological approach than working with people from the UK who suffer from trauma because on top of their carrying trauma, they have to face an unfamiliar country and its legal, immigration and healthcare system that they know nothing about. Political and financial uncertainty in Europe and ongoing conflicts in Asia, Middle East and Africa have forced millions of people out of their countries and thousands to immigrate in the UK (Hawkins, 2018; Rogers, 2018). Psychologists in the NHS are exposed to extreme and horrific traumatic acts and events that many of these people of different cultural backgrounds have witnessed and/or experienced. There is need for recognition of individual differences and refrain from participating in any type of cultural stereotyping among organisations and professionals (Dudley and Walsall Mental Health Partnership NHS Trust, 2014). The NHS needs to provide more resources and guidance to psychologists in order to promote cultural awareness that will assist them in their work. By increased cultural awareness, professionals can develop their professional self-awareness and decision-making ability to work-related issues by taking into account the many ways that culture influences behaviours, beliefs, ethics and cognitive schemas of clients (Feize & Gonzalez, 2018; Connerley & Pedersen, 2005). In addition, cultural awareness could improve access for all ethnic groups, improve treatment efficacy, provide a deeper understanding of how clients perceive their conditions, improve safety for clients and psychologists and improve health outcomes (Black and Ethnic Minority Working Group, 2010). Depending on one theory and one approach and follow the same treatment plans and guidelines without considering the cultural background of the client could be harmful for both the client and organisation (Connerley & Pedersen, 2005).

The sixth and last subordinate theme of this superordinate theme is entitled *'Considerations of improving systems'* and demonstrates participants' thoughts as to which issues need to be taken in consideration by the NHS and changed in order for them to be able to cope with their work without being at emotional and/or physical risk. As mentioned earlier and according to the participants, the alleviation of overloaded caseloads and working schedules should be among the NHS' priorities for the well-being of its staff. Psychologists mention that because of the heavy workload they have no room for reflective time and space in order to process their emotions which results in accumulation of negative emotions. In addition, others report that due to their overloaded working schedule they do not have time to take their lunch break or do the requested CPD. In other occasions, participants mention that there is need for more available in-service training as nowadays they have to often seek training programmes out of service and cover the costs by themselves. Participants suggest that if the NHS could provide more resources (e.g. more service staff, more specialised services, more flexibility in accessing services, more training) in order to deal with the high service demand, it could potentially alleviate a number of their working stressors. Furthermore, participants also highlight the need for within-service psychologists with specialisation in trauma in order to assess and treat staff that face emotional and physical challenges as a result of their work. Another important aspect that a number of participants reveal is the lack of training, or the absence of it, they received in regards to trauma therapy. Participants mention that it could have been very helpful if during their training as psychologists they had been taught and shown techniques of treating people with trauma. Research suggests that the less trained psychologists in trauma work have increased chances to experience high levels of distress compared to more experienced professionals as their distress levels could be significantly less (Ireland, 2018; Dombo & Blome, 2016; Tabor, 2011; Meichenbaum, 2007; Way, VanDeusen, & Cottrell, 2007; Pearlman & Mac Ian, 1995). In addition, more experienced and trained therapists might be better prepared to face trauma work, more able to incorporate theoretical frameworks to their work, more likely to engage in CPD and more able to handle boundary issues and therefore safeguard themselves (Chouliara et al., 2009; Kadambi & Ennis, 2004). Boundaries in the therapeutic process are important and need to be clear. Inexperienced therapists are at an increased risk of setting unclear professional boundaries as their sense of responsibility towards the client becomes heightened due to their vulnerable state (Iqbal, 2015; Mailloux, 2014; Cohen & Collens, 2013).

This study results suggest that effects of exposure to clients' traumatic experiences are not considered a priority for the well-being and health of the staff in trusts. As a result, many NHS trusts fail to provide adequate qualified clinical supervision, training and teaching to their staff (Robertson, Wenzel, Thompson, & Charles, 2017), the lack of which is considered a factor for the development of VT (Branson, 2019; Berger & Quiros, 2014; Tabor, 2011). According to the Royal College of Physicians (2015) less than 44% of the NHS staff in England reports that their employer takes positive actions to promote their well-being and health. NHS organisations have been rated as having 'poor' staff well-being and health and also to be among the 25% of worst performers on measures of patient satisfaction (Royal College of Physicians, 2015; Boorman, 2009). Good staff well-being and health is clearly linked with a safe, high quality and effective patient care and patient satisfaction while at the same time can decrease absence levels and have a positive impact on trusts' productivity (Royal College of Physicians, 2015; Boorman, 2009). The Department of Health estimates that each NHS trust in England could save an average of approximately £350,500 per year by reducing sickness absences alone (Royal College of Physicians, 2015; Boorman, 2009). Additional costs deriving from staff's poor health and well-being include: recruitment costs to replace staff who leave as a result of illness, stress and/or poor job satisfaction estimated to a total of £4,500 per vacancy; and costs for the use of temporary staff and agencies to cover absences due to sickness estimated to cost the NHS a staggering £1.45 billion each year (Royal College of Physicians, 2015; Boorman, 2009). Unfortunately, as a result of the above circumstances, many NHS trusts fail to work with their staff to identify and address effects of exposure to clients' trauma or to provide specialised personal therapy and sufficient vacation time that is considered of utmost importance for staff's well-being (Sommer, 2008; Palm, Polusny, & Follette, 2004; Brady et al., 1999).

Also, the present study shows that the context of the workplace can significantly enhance or reduce the therapist's anxiety and stress and their general vulnerability to the effects of VT. During the last few years, the NHS has undergone immense budget cuts (British Medical Association, 2018; Harris, 2017). The chronically underfunded services of mental health face struggle to meet demands with main reasons being the staff shortages and staff reductions (British Medical Association, 2018; Harris, 2017). At the same time only 18% of the NHS trusts choose to primarily invest their budget on secondary psychological therapies and services and consequently this has a great impact on clients with more complex mental health problems (e.g. trauma cases) to access quality and sufficient therapies (British Medical Association, 2018). The budget cuts and de-prioritisation of psychological therapies in secondary care is very concerning, as the NHS digital data shows a 63% increase in the number of people requesting and accessing secondary mental health services (British Medical Association, 2018). In addition, a survey by the British Psychoanalytic Council and the UK Council for Psychotherapy among 650 NHS therapists reported that 77% see clients with complex needs (British Medical Association, 2018).

The above circumstances lead a great number of psychologists in the NHS to physical and emotional exhaustion through long working hours, heavy schedules and caseloads as well as consecutive therapy sessions with clients who suffer from trauma. In many cases there is an unrealistic demand of high schedules and in other cases there is no caseload limit (Robertson et al., 2017; Royal College of Physicians, 2015). These continuous contextual circumstances can be a factor and influence for the development of VT (Hartley et al., 2019).

4.2 Strengths

The present study suggests the presence of VT among psychologists within the NHS. The current research is timely as there is need for increased awareness about the impact of working with people with trauma since the recent pandemic is expected to increase trauma prevalence, and the level of immigration around the world is high. Moreover, this study raises further awareness of an overlooked issue and offers useful suggestions, details and information for potential approaches and changes to organisational, professional and personal level. To author's knowledge this is the first study in the UK that explores and describes the lived experience and the impact of repeated exposure to traumatic clients' accounts, which suggests the presence of VT, on psychologists in the NHS. The results add to the existing literature of factors that can contribute to and/or influence the development of VT. In addition, this study further describes the challenges and alterations at the cognitive, emotional and social level that take place in psychologists. Also, the utilisation of qualitative methodology allowed the gathering of comprehensive and detailed accounts of the ways in which the psychologists can be affected by their work.

4.3 Limitations

There are several limitations of this study that suggest caution in interpreting the results and generalisability of them across other professions. A potential limitation is the impact of the relationship between the interviewer and the interviewees as participants were recruited through personal networks and word of mouth. This in itself has limitations, as some of the participants were already familiar with the interviewer and this could have affected their responses. Moreover, the small sample of psychologists who work in London-based trusts is another limitation as it limits the generalisability of the results. Also, because of the overlooked and not well-addressed phenomenon of VT, it is unknown if participants underestimated or overestimated their symptoms and effects. Data collection used only a self-report method concerning the experienced symptoms and this limits the results to the subjective observation of the participants. Self-report methods solely rely on participants to acknowledge the existence of symptoms of the investigated phenomenon and can cause recall bias in how individuals apply meaning and interpret their experiences. The use of semi-structured interviews has some limitations as the flexibility they provide might reduce the reliability of results. In addition, the sex, the age and the ethnic background of the interviewer might have an impact on participants' honesty in their responses and on the amount of information they are willing to disclose. In addition, the study did not use any tool in order to measure participants' amount of exposure to clients' traumatic accounts and therefore it was not possible to determine the level of its relation to participants' symptoms. Another limitation of the study is the absence of a comparison group of psychologists.

4.4 Implications

The results of this study have direct relevance to professional practice with psychologists working in the NHS. A rise in awareness and attention is needed and should be directed towards psychologists who are exposed to constant traumatic accounts from their clients as the results highlight the acute and chronic consequences on their physical and psychological health and well-being.

It is clear that organisational support for psychologists who work with trauma survivors is important. Trusts need to take into consideration that repeated exposure to traumatic disclosures can affect psychologists, thus incorporate and adapt policies to aid psychologists to identify and cope with their symptoms. Moreover, this study suggests that organisations should provide adequate and specialised resources (e.g. supervision, training options) to psychologists in order to enhance their professional efficacy and self-esteem as this could increase their resilience to VT symptoms. In addition, trusts need to encourage, promote and support their employees with effective safeguarding and self-care strategies (e.g. time and space for reflection, lunch breaks, leisure time, work-life balance) in order to develop a positive work environment for staff.

In terms of education, training programmes for psychologists could include in their curriculum specifically designed modules for working with trauma survivors in order to sensitise and prepare trainee psychologists to the implications of working with trauma survivors in future practice. This type of specialised training could potentially be and serve as a protective variable in the development of VT symptoms. In addition, continuing education should focus on professional and personal risk factors as well as how individuals could identify and address them in their professional environment. For psychologists, this might be a step towards an increased self-awareness and early recognition of symptoms. Supervisors could support this education by promoting a trusting relationship with their supervisees and conducting regular assessments for changes in cognitive schemas or appearance of VT symptomatology as the prevention and/or recognition of symptoms is an active process that requires frequent and ongoing monitoring. Moreover, supervisors could encourage their supervisees to openly share how their work is affecting them in every level, without being shamed for these effects. All types of education should emphasise that these symptoms is a normal response to working with people who have experienced traumatic situations and it is not a result of psychologists’ professional weakness or inadequateness. By being self-aware of the potential risks of working with traumatised clients, psychologists could be more effective in applying self-care strategies such as mindfulness techniques, prioritising time to self, personal therapy, establishing firm work-personal life boundaries and seeking support from friends and family.

These implications are important not only for the well-being of psychologists but also for their clients as the state of psychologist affects the quality of services they provide to their clients.

4.5 Future research

The present study suggested the presence of VT in psychologists working with clients with trauma in the NHS settings in the UK. Future research could use different designs in order to explore the presence of VT among healthcare professionals. For example, further qualitative or mixed-method studies could extent the knowledge of exposure to clients' trauma and help to the development of safeguarding guidelines for healthcare professionals. Future studies could help to better understand if other health professionals who work with clients with trauma experience similar negative effects (e.g. psychiatrists, nurses, care coordinators). Prospective studies could help the understanding of such relationship by isolating variables that might affect the development of such effects. Future longitudinal studies could show changes in levels of VT over time. Moreover, longitudinal research might verify if alterations resulting from exposure to clients' trauma are sustained over a longer period of time or are reversible via tailored psychological and educational interventions.

Studies with a larger representative sample that would compare different groups of professionals (e.g. psychiatrists, psychologists) could explore and establish similarities and differences in risk and protective factors of VT. In addition, larger and diverse samples could further explore the potential role of different factors (e.g. gender, ethnic background, personal trauma history, years of professional experience) in the development of VT and test the effects of provided interventions.

Participants of this study have also disclosed work-related stressors outside of their exposure to their clients' traumatic accounts (e.g. organisational and trust policies, team dysfunction) that contributed to the experienced negative effects. Therefore, future studies could investigate further such stressors and the level they can influence the development of VT.

The identification of factors that could enhance psychologists' resilience and professional efficacy should be viewed as a major concern of public health as the level of need and demand for psychological services is high. Future research should focus to organisational strategies that help employees to manage and decrease the negative effects of exposure to clients' trauma. Another aspect that could be explored in future research is the role of treatment modality (e.g. individual, group) in the development of VT. In addition, future studies need to focus more in distinguishing the predictors and protective factors of VT in greater detail as this will assist in the development of effective prevention and coping strategies and interventions. For example, effectively assessing the type and amount of exposure to client's trauma is a multidimensional and difficult task for researchers and therefore it will be only beneficial for this facet to be explored further in future research. Additionally, future research can further investigate the aspect of how different types of repeated trauma exposure, as a result of working with different client populations (e.g. survivors of torture, survivors of sexual abuse, survivors of childhood abuse), might affect professionals in different levels.

The phenomenon of VT among psychologists and other healthcare professionals needs further exploration which will subsequently benefit clients as quality services and effective treatments depend greatly on the psychological and physical well-being of the clinicians.

5.0 CONCLUSIONS

Overall, the results of this study add to the current body of literature investigating the nature of VT amongst healthcare professionals. More specifically, the findings of this study have implications and provide information and insights about the experience of working with survivors of trauma and its effect on psychologists who are exposed to clients' traumatic accounts. This exposure has significant professional and personal consequences for psychologists that can lead to the development of VT. In this study, psychologists report emotional and physical symptoms that suggest the presence of VT and great professional and personal challenges. They mention cognitive disruptions and alterations of their beliefs, sense of safety, worldviews, trust towards others, job satisfaction and, sometimes, motivation, among others. In addition, results suggest that further work environment challenges can contribute and influence the presence of VT are the heavy caseloads, lack of cultural awareness, decreased sense of safety at work, unmet job expectations, lack of space and time for reflection and a general lack of specialised support within organisations. It is important to highlight and note that psychologists' experienced symptoms as a result to their clients' traumatic disclosures should be normalised and perceived as a natural process and consequence of working with this population. Trusts offering psychological services need to develop new staff support mechanisms, or update their current ones. The adequate and specialised organisational support could ameliorate the emotional well-being of psychologists and subsequently they can effectively continue to deliver needed services and treatment to the population in need.

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Appendix 1

COREQ

(COnsolidated criteria for REporting Qualitative research) checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note n/a.

Topic	Item number	Guide questions/description	Location on manuscript
Domain 1: research team and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	2.0 Methods; page 52
Credentials	2	What were the researcher's credentials? E.g. PhD, MD.	2.0 Methods; page 52
Occupation	3	What was their occupation at the time of the study?	2.0 Methods; page 52
Gender	4	Was the researcher male or female?	2.0 Methods; page 52
Experience and training	5	What experience or training did the researcher have?	2.0 Methods; page 52
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	2.0 Methods; page 57
Participant knowledge of the interviewer	7	What did the participants know about the researcher? E.g. personal goals, reasons for doing the research.	2.0 Methods; page 57
Interviewer characteristics	8	What characteristics were reported about the interviewer/facilitator? E.g. bias, assumptions, reasons and interests in the research topic.	2.0 Methods; pages 62
Domain 2: study design			
Theoretical framework			
Methodological orientation and theory	9	What methodological orientation was stated to underpin the study? E.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis.	2.0 Methods; page 59
Participant selection			
Sampling	10	How were participants selected? E.g. purposive, convenience, consecutive, snowball.	2.0 Methods; page 53
Method of approach	11	How were participants approached? E.g. face-to-face, telephone, mail, email.	2.0 Methods; page 54
Sample size	12	How many participants were in the study?	2.0 Methods; page 54
Non-participation	13	How many people refused to participate or dropped out? Reasons?	2.0 Methods; page 54
Setting			
Setting of data collection	14	Where was the data collected? E.g. home, clinic, workplace.	2.0 Methods; page 56
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	2.0 Methods; page 55
Description of sample	16	What are the important characteristics of the sample? E.g. demographic data, date.	2.0 Methods; page 55
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot-tested?	2.0 Methods; page 56

s	18	Were repeat interviews carried out? If yes, how many?	2.0 Methods; page 57
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	2.0 Methods; page 58
Field notes	20	Were field notes made during and/or after the interview or focus group?	2.0 Methods; page 63
Duration	21	What was the duration of the interviews or focus group?	2.0 Methods; page 56
Data saturation	22	Was data saturation discussed?	2.0 Methods; page 59
Transcripts returned	23	Were transcripts returned to participants for comment and/or correction?	2.0 Methods; page 59
Domain 3: analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	2.0 Methods; page 65
Description of the coding tree	25	Did authors provide a description of the coding tree?	2.0 Methods; page 61
Derivation of themes	26	Were themes identified in advance or derived from the data?	3.0 Results; page 65
Software	27	What software, if applicable, was used to manage the data?	2.0 Methods; page 59
Participant checking	28	Did participants provide feedback on the findings?	3.0 Results; page 66
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? E.g. participant number.	3.0 Results; page 66
Data and findings consistent	30	Was there consistency between the data presented and the findings?	4.0 Discussion; pages 100-110
Clarity of major themes	31	Were major themes clearly presented in the findings?	3.0 Results; pages 65-100
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	3.0 Results; pages 65-100

Appendix 2

Poster

School of Health Sciences, Department of Psychology

City, University of London

logists with National Health Service Working Experience

Needed for Research in

Psychologists' Health and Well-being

We are looking for qualified psychologists to take part in a study of vicarious trauma.

As a participant in this study, you would be asked to: attend an interview that will last approximately 1 hour and will take place in a convenient time and place for you.
Your participation would involve 1 session.

For more information about this study, or to volunteer for this study,
please contact:

School of Health Sciences, Department of Psychology
Researcher: Anastasios Toumpanakis; email: Anastasios.Toumpanakis@city.ac.uk
Supervisor: Dr Triece Turnbull; email: Triece.Turnbull@city.ac.uk

This study has been reviewed by, and received ethics clearance
through the Psychology Ethics Committee, City University London.

If you would like to complain about any aspect of the study, please contact the Secretary to the University's Senate Research Ethics Committee on 020 7040 3040 or via email:
Anna.Ramberg.1@city.ac.uk

Appendix 3

Information Sheet

Title of study:

Exploring the impact of clients' disclosures of trauma on psychologists working in the National Health Service: a qualitative study

CITY
UNIVERSITY OF LONDON
EST 1894

you to take part in a research study. Before you decide whether you is important that you understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

The aim of the study is to understand your perceptions and experiences of working with clients who suffered from psychological trauma. We are particularly keen to understand how working with people who have experienced emotional traumatic events, might positively or negatively impact your own health and well-being.

Why have I been invited?

You have been invited to participate in this study because you are a qualified psychologist and you are or have worked in an NHS service. We are interested in understanding the experiences of professionals with direct contact with clients who suffered from psychological trauma. The study aims to recruit twelve professionals.

Do I have to take part?

No. Participation in the project is voluntary. It is up to you to decide whether or not to take part. If you do decide to take part you will be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. You will have an opportunity to ask any questions you may have.

What will happen if I take part?

If you would like to participate in the study, please contact the researcher by email to arrange a convenient date and time to interview you. Ideally, we would like to interview face to face at a location convenient to you, this could be a community centre or a café close to work/home. The interview will last approximately one hour.

What do I have to do?

The interview will ask questions about the environment you work in, the aspect you enjoy, what aspects you find challenging, how you deal/cope with more distressing situations. We will ask you to consider what factors help your work and the impact this may have on your personal life. The interview will be audio-recorded with your consent.

What are the possible disadvantages and risks of taking part?

No foreseeable risks are linked with taking part in the research. However, you will be asked to discuss challenging cases with your clients and this might trigger some upsetting or unpleasant emotions on your part. If you find this distressing, the interview will be stopped and you will be supported immediately. If you need additional support, you will be invited to seek further support.

What are the possible benefits of taking part?

There are no foreseeable immediate personal advantages associated with this research. The findings of this study may help to inform future Health Psychology, and Occupational Health Psychology policies on the subject.

Will my taking part in the study be kept confidential?

Yes. All the information collected during the interview will be rigorously handled in a confidential manner according to the Data Protection Act 1998. The researcher and the supervisor will have access to the data which will be stored on password secured computers. The data will be kept securely in the City University London in a locked filing cabinet. In order to protect identity, each participant will be allocated an individual code which will consist of a letter and a number, e.g. Participant Number One would be P1, Participant Number Two would be P2, etc.

What will happen to results of the research study?

If the participants wish to receive a copy of the study, please contact the researcher in the provided details. The completed study will seek publication in relevant psychology journals such as the Journal of Health Psychology, the Journal of Occupational Health Psychology, the International Journal of Clinical and Health Psychology, etc.

What will happen if I don’t want to carry on with the study?

Participants are free to withdraw from the study without an explanation or penalty at any time.

What if I want to withdraw my data from the study?

You will have that opportunity to withdraw your data for up to one month after the end of the interview.

What if there is a problem?

If you have any problems, concerns or questions about this study, you should ask to speak to a member of the research team. If you remain unhappy and wish to complain formally, you

niversity complaints procedure. To complain about the study, you
3040. You can then ask to speak to the Secretary to Senate Research Ethics Committee and inform them that the name of the project is:

Exploring the impact of clients' disclosures of trauma on psychologists working in the National Health Service: a qualitative study

You could also write to the Secretary at:

Anna Ramberg
Secretary to Senate Research Ethics Committee
Research Office, E214
City, University of London
Northampton Square
London
EC1V 0HB
Email: Anna.Ramberg.1@city.ac.uk

City University London holds insurance policies which apply to this study. If you feel you have been harmed or injured by taking part in this study you may be eligible to claim compensation. This does not affect your legal rights to seek compensation. If you are harmed due to someone's negligence, then you may have grounds for legal action.

Who has reviewed the study?

This study has been approved by City, University of London Psychology Research Ethics Committee.

Further information and contact details

Researcher: Anastasios Toumpanakis
Email: Anastasios.Toumpanakis@city.ac.uk

Supervisor: Dr Triece Turnbull
Email: Triece.Turnbull@city.ac.uk

Thank you for taking the time to read this information sheet.

Appendix 4

Demographic Questions

Title of study:

Exploring the impact of clients' disclosures of trauma on psychologists working in the National Health Service: a qualitative study

What is your gender? ☐ Male ☐ Female ☐ Prefer Not To Say	**What is your age?** ☐ ______ ☐ Prefer Not To Say
Years of work in NHS services: ☐ ______ ☐ Prefer Not To Say	**Please indicate your ethnic origin:** ☐ ______ ☐ Prefer Not To Say
Please indicate your marital status: ☐ ______ ☐ Prefer Not To Say	**Please indicate your religion or belief:** ☐ ______ ☐ Prefer Not To Say

Appendix 5

Interview Guideline

Title of study:
Exploring the impact of clients' disclosures of trauma on psychologists working in the National Health Service: a qualitative study.

Introduction/establish relationship:
Participant and researcher introductions, making participant at ease by reassuring about confidentiality, thanking participants for deciding to participate in the interview, asking preference in addressing participant with first or family name.

Purpose:
Explanation of the aims of the interview; e.g. I would like to ask you some questions about your working in NHS services and the impact that this has on your well-being.

Timeline:
The interview will last up to an hour according to the amount and depth of information you wish to share. Do you have any questions before starting?

Topics	**Questions**
Views regarding working in the NHS settings.	**Q:** What brought you to work as a psychologist? **Q:** What aspect do/did you enjoy most about working in the NHS settings? **Q:** What is the level of freedom and control you have/had over your work in the NHS services? **Q:** Does/did your work match your expectations and beliefs?
Views on relationship with the clients.	**Q:** What type of clients do/did you work with? **Q:** Do/did you have any particular category of clients you like working with?
Views regarding issues arising from clients who sustained traumatic or emotionally difficult experiences.	**Q:** During your work have you encountered clients who sustained traumatic or emotionally difficult experiences? **Q:** Could you tell me more about this experience? How did you react to it during that period? What feelings, emotions and physical reactions did you experience as a result of your dealing with those issues? **Q:** What helped you to overcome the moment of difficulties? **Q:** Did you talk about the difficulties with anybody else? How was it? **Q:** Did you seek support among your service (e.g. supervisor, colleagues)? **Q:** After X years from that episode, what sense do you make of it? **Q:** How do you switch off from the involvement with clients?

sonal well-being.	**Q:** How challenging and traumatic situations at work affect your lifestyle in terms of sense of self, worldviews, spirituality, work motivation? **Q:** How do you recover after challenging moments with clients? What are your typical coping strategies? What do you find more difficult to overcome? **Q:** What resources do you use to safeguard you from upsetting stories brought about by your clients? **Q:** In view of your work in the NHS settings, what are your views regarding your sense of feeling safe? **Q:** In view of your experiences in the NHS settings with clients affected by psychological trauma, have you ever experienced moments in which you had nightmares about your clients? Intrusive images? Any other physical symptoms?
Views regarding support.	**Q:** Looking back to this experience now, what do you think it would have helped you more to face your experience? What type of support you think it would be most beneficial for you? **Q:** What kind of preparation did you have before seeing trauma clients (e.g. supervision, prior exposure to trauma cases, specific training for this population)?
Ending the interview.	**Q:** Could you please tell me of a specific time that you successfully dealt with a case?

Concluding: Thanking the participant for having taken part in the interview.

Appendix 6

Debrief Form

Title of study:
Exploring the impact of clients' disclosures of trauma on psychologists working in the National Health Service: a qualitative study.

oumpanakis
Email: Anastasios.Toumpanakis@city.ac.uk

Supervisor: Dr Triece Turnbull
Email: Triece.Turnbull@city.ac.uk

What was the aim of the study?

The aim of the study was to understand your perceptions and experiences of working with clients with trauma. We wished to understand how working with people who had experienced psychologically traumatic events, may impact your own health and well-being.

If I still have concerns and queries about this study, could I ask questions at this stage?

Please, ask any questions you might still have to the researcher after the interview by contacting him via the email provided.

How can I contact the researcher if I wish to withdraw after the interview?

Do not hesitate to contact the researcher after the interview by email at the contact provided.

How can I get the outcome of this study?

If you wish to receive a copy of the completed study please email the researcher at the contact provided.

This interview has caused me distress but I am not at ease at discussing with the researcher now. What should I do?

Please contact your GP who could direct you to counselling support services available close to your location. Alternatively, you could contact your Occupational Health Department or consult www.mind.org.uk for further general mental health information.

Thank you for taking part in this research study.

Appendix 7

Ethical Approval

Psychology Research Ethics Committee
School of Arts and Social Sciences
City, University of London

London EC1R 0JD

19th May 2016

Dear Anastasios Toumpanakis and Triece Turnbull

Reference: PSYETH (P/F) 15/16 198
Project title: Exploring the impact of clients' disclosures of trauma on psychologists working in the National Health Service: a qualitative study.

I am writing to confirm that the research proposal detailed above has been granted approval by the City, University of London Psychology Department Research Ethics Committee.

Period of approval
Approval is valid for a period of three years from the date of this letter. If data collection runs beyond this period you will need to apply for an extension using the Amendments Form.

Project amendments
You will also need to submit an Amendments Form if you want to make any of the following changes to your research:

(a) Recruit a new category of participants
(b) Change, or add to, the research method employed
(c) Collect additional types of data
(d) Change the researchers involved in the project

Adverse events
You will need to submit an Adverse Events Form, copied to the Secretary of the Senate Research Ethics Committee (anna.ramberg.1@city.ac.uk), in the event of any of the following:

(a) Adverse events
(b) Breaches of confidentiality
(c) Safeguarding issues relating to children and vulnerable adults
(d) Incidents that affect the personal safety of a participant or researcher

Issues (a) and (b) should be reported as soon as possible and no later than 5 days after the event. Issues (c) and (d) should be reported immediately. Where appropriate the researcher should also report adverse events to other relevant institutions such as the police or social services.

Should you have any further queries then please do not hesitate to get in touch.

Appendix 8

Consent Form

Title of study:

Exploring the impact of clients' disclosures of trauma on psychologists working in the National Health Service: a qualitative study.

Researcher: Anastasios Toumpanakis
Supervisor: Dr Triece Turnbull

		Initials
1.	I agree to take part in the above City, University of London research project. I have had the project explained to me, and I have read the participant information sheet, which I may keep for my records. I understand this will involve: • be interviewed by the researcher • allow the interview to be audiotaped • complete questionnaire asking me about my demographics (age/gender/years of work in the NHS services/ethnic origin/marital status).	
2.	This information will be held and processed for the following purpose(s): I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party. No identifiable personal data will be published. The identifiable data will not be shared with any other organisation. AND I understand that the following steps will be taken to protect my identity from being made public: a) the data will be kept in a locked filing cabinet at City, University of London; b) each participant will be allocated an individual code which will consist of a letter and a number to protect identity; and c) access to computer files will be available by password only. AND I understand that the data will be used for the preparation of scientific reports/articles that could be published. AND I consent to the use of direct quotations from the audiotapes in publications.	

3.	I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalized or disadvantaged in any way.	
4.	I agree to City, University of London recording and processing this information about me. I understand that this information will be used only for the purpose(s) set out in this statement and my consent is conditional on the University complying with its duties and obligations under the Data Protection Act 1998.	
5.	I agree to take part in the above study.	

Name of participant Signature Date

Name of researcher Signature Date

When completed, 1 copy for participant; 1 copy for researcher file.

Section C: Publishable papers

1. The effectiveness of plant-based diets in promoting well-being in the management of Type 2 diabetes: a systematic review

2. Burnout in Greek mental health professionals: a behavioural change intervention

1. The effectiveness of plant-based diets in promoting well-being in the management of Type 2 diabetes: a systematic review

Anastasios Toumpanakis,[1] Triece Turnbull,[2] Isaura Alba-Barba[3]

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ABSTRACT

Objective: Diet interventions have suggested an association between plant-based diets and improvements in psychological well-being, quality of life and HbA1c control in population with diabetes. The aim of this review is to systematically analyse the available literature on plant-based diet interventions targeting diabetes in adults and to clearly define the benefits on well-being of such interventions.

Research design and methods: This is a systematic review of controlled trials. A computerised systematic literature search was conducted in the following electronic databases: Allied and Complementary Medicine, Cochrane Central Register of Controlled Trials, Cumulative Index to Nursing and Allied Health Literature, E-Journals, Excerpta Medica Database, MEDLINE, Health Management Information Consortium, PsycARTICLES, PsycINFO, PubMed, SocINDEX and Web of Science.

Results: The search strategy retrieved 1,240 articles, of which eleven met the inclusion criteria (n = 433; mean sample age 54.8 years). The Quality Assessment Tool for Quantitative Studies was used to assess the quality of the studies. Plant-based diets were associated with significant improvement in emotional well-being, physical well-being, depression, quality of life, general health, HbA1c levels, weight, total cholesterol and low-density lipoprotein cholesterol, compared with several diabetic associations' official guidelines and other comparator diets.

Conclusions: Plant-based diets can significantly improve the psychological health, quality of life, HbA1c levels and weight and therefore the management of diabetes.

Keywords: plant-based, vegan, wellbeing, Type 2 diabetes.

Significance of this study

What is already known about this subject?

- Several longitudinal studies suggest that plant-based diets are associated with lower risk of Type 2 diabetes.

- A meta-analysis of controlled trials focussing upon vegetarian diets suggested significant improvement of glycated haemoglobin in people with Type 2 diabetes.

What are the new findings?

- To our knowledge, this is the first summary of the significant psychological and medical outcomes of plant-based diet interventions in adults with Type 2 diabetes. This systematic review of 11 controlled trials including 433 participants suggests that plant-based diets can significantly improve the psychological health, the quality of life, the HbA1c levels and weight and therefore the overall management of Type 2 diabetes. Furthermore, plant-based diets could potentially improve the diabetic neuropathic pain and the levels of total cholesterol, low density lipoprotein cholesterol and triglycerides in Type 2 diabetes.

How might these results change the focus of research or clinical practice?

- The included trials conducted in five different countries across four continents which suggests that the generalisability of the findings is likely.
- Scientific knowledge of the benefits of a plant-based diet can help health professionals to focus on designing and providing dietary interventions that can have a positive impact in the quality of life of people with Type 2 diabetes.

INTRODUCTION

Diabetes facts

The World Health Organization (WHO) estimates that in 2014 422 million adults were living with diabetes globally, while according to the International Diabetes Federation (IDF) this number will rise to 642 million by 2040.[1, 2] In the UK the number of people who have diabetes is over 4.5 million, and in the USA it is more than 30 million respectively.[2-4] In 2010/2011 in the UK diabetes costed approximately £10 billion in direct costs and £14 billion in indirect costs, totalling £24 billion (10 per cent of the NHS budget), with the estimation being £40 billion in total in 2035.[5] In the USA the annual economic burden is $245 billion, $176 and $69 billion in direct and indirect costs respectively.[6]

Diabetes UK states that the 90 per cent of people with diabetes have T2D, while at the same time the percentage of people with T2D is on the rise and increasing.[3] The increasing levels of obesity in many countries nowadays have underlined a very concerning, newly introduced aspect: the number of T2D in children is growing.[4] The IDF raises the concern by stating that T2D in children has the potential to become a global public health issue which will lead to serious health outcomes and underlines the need for more research in this aspect of diabetes.[2]

The impact of diabetes

Diabetes can cause a number of health complications if not well managed and treated and has the potential to have a huge impact on people's physical and psychological well-being. The WHO and the IDF suggest that diabetes considerably increases the risk of cardiovascular disease (CVD), nephropathy, loss of vision due to diabetic retinopathy and lower extremity amputation.[1, 2] Diabetes (and its health complications) is also associated with an increased risk of mortality in most countries.[2, 7] The IDF estimates the number of people who died from diabetes in 2015 before the age of 60 was approximately 5 million; 14.5 per cent of all-cause mortality globally is attributed to diabetes.[2] The countries with the highest number of people with diabetes are the ones with the highest number of deaths associated with diabetes: People's Republic of China, Republic of India, Russian Federation and the USA. In 2015 T2D was the seventh leading cause of death in the USA.[4]

T2D is considered to be one of the most psychologically demanding chronic conditions[8], and people with diabetes often have poor psychological well-being[9]. Diabetes is often comorbid with depression, which has an impact on its management and control.[1] A systematic review[10] shows high rates of comorbidity between diabetes and depression and suggests that depression is three times as common among people with diabetes. The psychological stress associated with the management of diabetes could lead to elevated symptoms of depression.[11] Depression comorbid with T2D has been associated with poorer glycaemic control and poorer management of the condition.[12-14]

Diabetes management

In January 2018 the American Association of Clinical Endocrinologists and the American College of Endocrinology released their new guidelines in which they suggest that plant-based diet is the optimal nutrition plan for people with diabetes as it promotes the well-being and the better management of diabetes.[15]

The IDF reports that the most influential factor for the development of T2D is lifestyle behaviour commonly associated with poor diet (e.g. processed and high fat content foods).[2] The WHO underlines the importance of achieving a standardised and consistent management approach by promoting interventions that support healthy diets.[1]

There is a large body of research that suggests the association between high meat consumption and T2D.[16-19] The European Prospective into Cancer and Nutrition (EPIC)-InterAct study[20] is a large prospective cohort study which explored the role of lifestyle and genetics on the risk of developing T2D in approximately 340,000 adults from eight countries in Europe during a mean period of eleven years. The results of the EPIC-InterAct study[20] show a high risk of T2D among individuals with high meat consumption, specifically red and processed meat. Moreover, after controlling and managing other risk factors for T2D (e.g. smoking, physical activity, alcohol intake), the association between meat consumption and incidence of T2D remained statistically significant. This suggests the importance of healthy diet behaviour in the management of T2D.

The term *plant-based diet* refers to eating habits that avoid the consumption of most or all animal products and support high consumption of fruits, vegetables, legumes, seeds, whole grains and nuts.[21] Satija et al.[22] reviewed three prospective cohort studies of a total sample of 200,727 participants and concluded that a plant-based diet is associated with significantly lower risk of T2D. Tonstad et al.[23] state that plant-based diets could effectively and substantially decrease diabetes incidents. Furthermore, high consumption of fibre, whole grains, fruits and vegetables is associated with a lower risk of T2D.[24-27] A plant-based diet pattern seems to offer high protection against the development of diabetes as it contains antioxidants, fibre, micronutrients and unsaturated fatty acids, which are considered to act as protective factors against diabetes.[22] In addition, Mayo[28] states that the management of diabetes is mostly based on a behavioural approach in which individuals could establish nearly complete control of their condition as long as they have been equipped with the right knowledge and skills. This suggests that effective management of diabetes could result in better glycaemic control and psychological well-being.

A meta-analysis[29] focusing upon vegetarian diets (defined as those excluding meat, poultry and fish, and including eggs and dairy) in diabetes revealed a significantly improved glycated haemoglobin (HbA1c) in people who followed a vegetarian diet pattern. No systematic review was found in the literature solely focussing on the psychological and medical outcomes of plant-based diet interventions in adults with T2D.

Objectives

The aim of this review is to systematically analyse the available literature on plant-based diet interventions targeting and/or including adults with diabetes and to clearly define the benefits on well-being of such interventions.

METHODS

The incorporation of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines was utilised in order to conduct this review.[30, 31] The following criteria were considered for inclusion in the systematic review: (1) plant-based diet interventions targeting or including adults with T2D; (2) age of participants ≥ 18 years; (3) clearly defined health outcomes; (4) controlled trials (CTs) with length of ≥ 3 weeks; and (5) peer reviewed studies. The exclusion criteria were: (1) diet interventions for diabetes other than type 2; (2) age of participants < 18 years; (3) uncontrolled studies; (4) diet interventions that included more than 10% of daily calories on animal products; and (5) duplicate results.

Search strategy

A computerised systematic search was performed on 10 November 2017 in the following electronic databases limited to studies published in English language since the inception of each database: Allied and Complementary Medicine (AMED); Cochrane Central Register of Controlled Trials (CENTRAL); Cumulative Index to Nursing and Allied Health Literature (CINAHL); E-Journals; Excerpta Medica Database (EMBASE); MEDLINE; Health Management Information Consortium (HMIC); PsycARTICLES; PsycINFO; PubMed; SocINDEX; and Web of Science. In order to search for further potentially eligible research material, the reference lists of studies with relevant topic were searched and reviewed. The following were the search terms used to locate/find studies: (1) plant based OR plant-based OR "plant based" OR plant food OR "plant food" OR vegan* OR vegetarian* OR "Daniel fast"; (2) diabet* OR T2D OR DT2, and (3) intervention* OR program* OR "controlled trial*" OR "randomised controlled trial*" OR "randomized controlled trial*" OR RCT.

Data extraction

The following data was collected from each study as available: quality of life; self-esteem; depression; perceived pain and neuropathy symptoms; foot conductance; nutritional efficacy; general efficacy; dietary adherence; dietary restraint; dietary disinhibition; diet acceptability; HbA1c; weight; fasting blood glucose (FBG); total cholesterol; low-density lipoprotein (LDL) cholesterol; triglycerides; and diabetes-related medication. In addition, baseline characteristics of each study's sample size, mean age, gender (proportion of men), design and duration were collected. Mean values for baseline age, proportion of male population and HbA1c were also calculated.

Data screening and quality measures

The search results from the databases were combined and then the identified duplicates were removed. The described inclusion criteria were applied in a standardised manner, and relevant studies were screened using the title, abstract and full text of the article.

The Quality Assessment Tool for Quantitative Studies is a standardised quality appraisal instrument that was developed by the Effective Public Health Practice Project (EPHPP) of McMaster University for assessing the quality of public health.[32] The instrument has been evaluated for inter-rater reliability, content validity and construct validity and has received high scores.[33, 34] This quality assessment tool and its dictionary are provided at www.ephpp.ca. Two researchers carried out the quality assessment independently. The identified relevant studies were critically assessed according to the EPHPP's tool and rated as 'strong', 'moderate' or 'weak' in six sections: (1) selection bias; (2) study design; (3) confounders; (4) blinding; (5) data collection methods; and (6) withdrawals and dropouts. The aim of the quality assessment was to extract results from studies with an overall 'strong' or 'moderate' methodological rating. Studies that were rated as 'poor' have been excluded from the systematic review. Please see Table 1 for the results of quality assessment of included studies.

Table 1: Quality assessment results for the included studies

Author(s)/Year	Selection Bias	Study Design	Confounders	Blinding	Data Collection Methods	Withdrawal and Dropouts	Global Rating
Wright, Wilson, Smith, Duncan & McHugh, (2017)	Moderate	Strong	Weak	Moderate	Strong	Moderate	Moderate
Lee, Kim, Lee, Kim, Park, Jeong, Jeon, Shin & Lee, (2016)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Bunner, Wells, Gonzales, Agarwal, Bayat & Barnard, (2015)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Soare, Khazrai, Del Toro, Roncella, Fontana, Fallucca, Angeletti, Formisano, Capata, Ruiz, Porrata, Skrami, Gesuita, Manfrini, Fallucca, Pianesi & Pozzilli, (2014)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Mishra, Xu, Agarwal, Gonzales, Levin & Barnard, (2013)	Moderate	Strong	Strong	Moderate	Strong	Moderate	Strong
Kahleova, Hrachovinova, Hill & Pelikanova, (2013)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Kahleova, Matoulek, Malinska, Oliyarnik, Kazdova, Neskudla, Skoch, Hajek, Hill, Kahle & Pelikanova, (2011)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Ferdowsian, Barnard, Hoover, Katcher, Levin, Green & Cohen, (2010)	Moderate	Strong	Strong	Moderate	Strong	Strong	Strong
Barnard, Gloede, Cohen, Jenkins, Turner-McGrievy, Green & Ferdowsian, (2009b)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Barnard, Cohen, Jenkins, Turner-McGrievy, Gloede, Green & Ferdowsian, (2009a)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Nicholson, Sklar, Barnard, Gore, Sullivan & Browning, (1999)	Strong	Strong	Strong	Moderate	Strong	Moderate	Strong

RESULTS

Study selection process

The search strategy retrieved 1,240 articles. After removing the duplicates, the title/abstract screening process identified 41 studies. After a further full-text assessment, thirty articles were excluded from the systematic review and eleven met the inclusion criteria (please see Figure 1). No additional publications were found through reference lists and hand searching.

The included studies relied on different tools in order to extract psychological data outcomes, and therefore a meta-analysis was not possible in this regard. For the other outcomes of our study, we considered that because the overall pooled N in the study is small, the CIs would be quite wide due to imprecision, which might cause our pooled estimate to cross the null hypothesis, which would make it difficult to draw a conclusion in either direction. Dietary interventions are difficult to engage a large number of individuals as it is hard for participants to alter their dietary patterns for a medium/long period of time. Our aim was to present as clear as possible the physical and psychological outcomes of plant-based interventions.

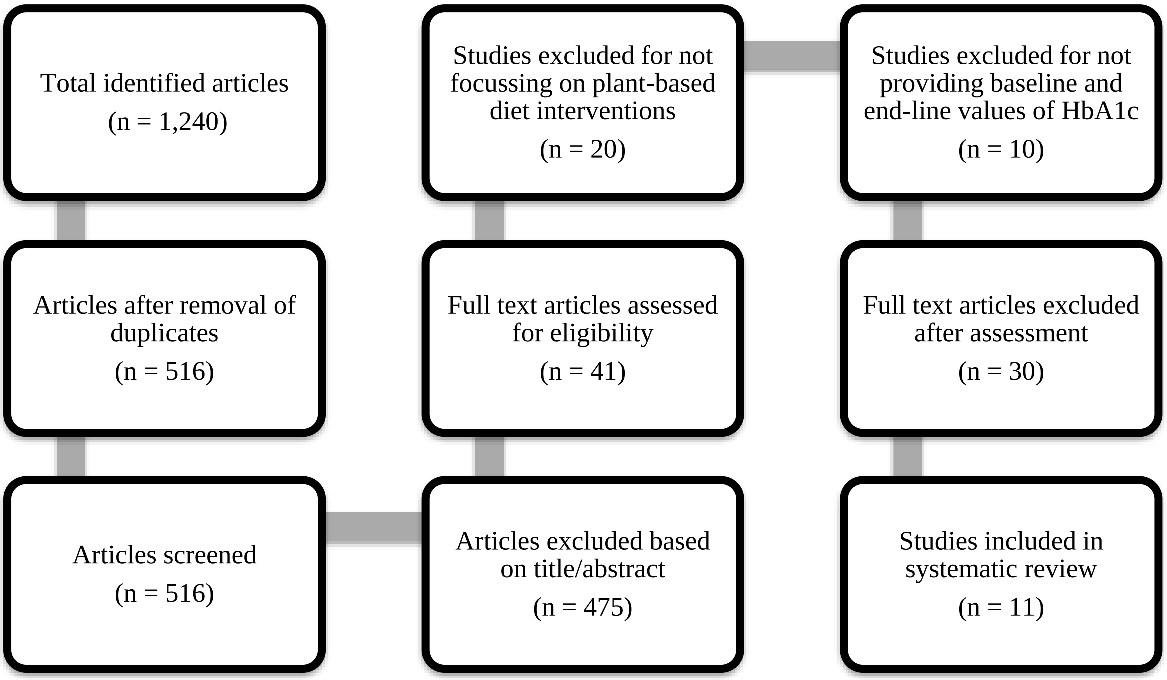

Figure 1: Study selection process

Study characteristics

The eleven included studies were published between 1999 and 2017 (please see Table 2). Two of the studies produced 2 articles from the same sample highlighting different aspects of research; these articles are included:

- Kahleova et al., (2013) used different data from Kahleova et al., (2011).[35, 36]
- Barnard et al., (2009b) used different data from Barnard et al., (2009a).[37, 38]

The majority of the studies (n=6)[37, 38, 39, 40, 41, 42] were conducted in the USA, while the rest took place in Czech Republic (n=2)[35, 36], Italy (n=1)[43], New Zealand (n=1)[44] and South Korea (n=1)[45]. One study had been conducted in a supervised residential environment[43], while the rest had been conducted in community-based settings. The total sample size was 433 participants (219 in the intervention groups/214 in the control groups; mean sample size 48), aged between 27 and 80 years (mean age 54.8 years). The number of withdrawals was reported in all studies, with the rates being between 3.5 per cent and 29.1 per cent. All studies targeted populations with T2D except for three.[39, 40, 44] Of these three studies, two[39, 40] included individuals with BMI ≥ 25 kg/m^2 and/or T2D, and one[44] also included individuals with BMI ≥ 25 kg/m^2 and at least one diagnosis of T2D or ischaemic heart disease or hypertension or hypercholesterolaemia. Therefore, not all of the participants of these three studies had T2D, but in the results specific outcomes related to the individuals with T2D were described.

All included studies were CTs with a duration range of between 3 and 74 weeks (mean duration 23.2 weeks). Of the nine CTs, seven were RCTs, of which four reported the randomisation process[38, 41, 44, 45] and three failed to describe it.[36, 42, 43] Moreover, two studies used a parallel design[36, 44] and one used a cluster study design[39]. Eight of the studies examined vegan diets in the intervention groups, while one study examined plant-based diet with an option of one portion of low-fat yogurt a day, which accounted for approximately 8 per cent of the total daily intake of calories[36]. A full description of the diet intervention was described in all of the articles. All studies reported HbA1c as their primary or secondary outcome, which was measured at baseline and at the end of each study in both groups. From the eleven articles included, three reported psychological well-being outcomes in their results. The studies were dietary interventions and therefore none included blinding of participants. Five CTs provided nutritional education in both groups[36, 38, 42, 43, 45] and four provided education only to the intervention group.[39, 40, 41, 44] All studies reported both baseline and end-line results and used validated measures. Highly specialised professionals (medical doctors, registered dieticians) delivered the dietary interventions in all of the studies.

Table 2: Data extraction of the studies used for the systematic review

Author(s), Year, Country	Study design	Duration (weeks)	Sample N (IG/CG)	Mean age (years) (IG/CG)	Males (%) (IG/CG)	HbA1c (%) IG (Baseline/End-line)	HbA1c (%) CG (Baseline/End-line)	Exposure diet	Comparator diet	Outcomes
Wright et al., 2017, New Zealand	RCT	24	9* (7/2)	56 (56/56)	40.0 (33.3/46.9)	6.0/5.7	5.5/5.7	Low-fat plant-based	Omnivorous	Quality of life significantly improved in the IG. General and nutritional self-efficacy and self-esteem was significantly greater in the IG than in the CG. Medication usage decreased in the IG group, while it increased in the CG. Adherence was significantly greater in the IG.
Lee et al., 2016, South Korea	RCT	12	93 (46/47)	58.1 (57.5/58.3)	19.25 (13.0/25.5)	7.7/7.1	7.4/7.2	Vegan	Korean Diabetic Association guidelines	Reduction in HbA1c was significantly greater in the IG than in the CG. FBG reduced only in the IG. There was a greater decrease in LDL cholesterol in the IG. Triglycerides increased in the IG and decreased in the CG. The CG reported higher rates of adherence.
Bunner et al., 2015, USA	RCT	20	34 (17/17)	57 (57/58)	44.1 (35.3/53.0)	8.0/7.2	7.8/7.8	Low-fat plant-based	Omnivorous	Quality of life significantly improved within the IG. Significant improvements in pain were found in the IG. The IG had a significant reduction in HbA1c. Reduction in weight was significantly greater in the IG than in the CG. Total and LDL cholesterol decreased in the IG and increased in the CG. There was a greater increase of triglycerides in the

										CG. Electrochemical skin conductance in the foot declined in the CG, while it stayed constant in the IG. Adherence in the IG was high.
Soare et al., 2014, Italy	RCT	3	51 (25/26)	66 (67/65)	49.0 (44.0/53.8)	6.7/6.3	6.8/6.6	Low-fat plant-based	Italian Association of Doctors of Diabetology guidelines	The IG had a significantly greater reduction in HbA1c than the CG. There was a significantly greater weight loss in the IG compared with the CG. FBG significantly decreased within-group only in the IG. Total and LDL cholesterol significantly declined only in the IG. Adherence was high in both groups.
Mishra et al., 2013, USA	CT	18	43Ł (21/22)	45.2 (44.3/46.1)	17.2 (22.5/12.1)	7.54/6.94	7.13/7.05	Low-fat vegan	Omnivorous	The IG had a significant reduction in HbA1c compared with the CG. Significant improvements in weight were found in participants with T2D.
Kahleova et al., 2013, Czech Republic	RCT	24	74± (37/37)	56.1 (54.6/57.7)	47.3 (46.0/49.0)	7.6/6.95	7.7/7.46	Plant-based	European Association for the Study of Diabetes guidelines	Depression and quality of life significantly improved only in the IG. Dietary disinhibition decreased significantly only in the IG. Dietary restraint increased significantly more in the CG. The IG reported high levels of adherence.
Kahleova et al., 2011, Czech Republic	RCT	24	74 (37/37)	56.1 (54.6/57.7)	47.3 (46.0/49.0)	7.6/6.95	7.7/7.46	Plant-based	European Association for the Study of	HbA1c significantly decreased only in the IG. Reduction in weight was significant only in the IG.

									Diabetes guidelines	Reduction in LDL cholesterol was significant only in the IG. There was a greater reduction in total cholesterol in the IG. Triglycerides reduced only in the IG, while increased in the CG.
Ferdowsian et al., 2009, USA	CT	22	19† (10/9)	44 (46/42)	17.7 (26.5/4.4)	7.4/7.1	7.0/6.7	Low-fat vegan	Omnivorous	HbA1c similarly decreased in both groups. Medium adherence was reported in the IG.
Barnard et al., 2009b, USA	RCT	74	99‡ (49/50)	55.6 (56.7/54.6)	39.4 (45/34)	8.05/7.71	7.93/7.79	Low-fat vegan	American Diabetes Association guidelines	Dietary disinhibition and hunger decreased in both groups. Dietary restraint increased in greater degree in the CG than in the IG. Diet satisfaction, adherence and acceptability of diet was similar in both groups.
Barnard et al., 2009a, USA	RCT	74	99 (49/50)	55.6 (56.7/54.6)	39.4 (45/34)	8.05/7.71	7.93/7.79	Low-fat vegan	American Diabetes Association guidelines	HbA1c reduction was greater in the IG than in the CG. Significant weight loss within-group was reported in both groups. FBG significantly decreased within-group only in the IG. Total cholesterol and LDL cholesterol significantly declined in both groups. Triglycerides significantly decreased only in the IG.
Nicholson et al., 1999, USA	RCT	12	11 (7/4)	55.5 (51/60)	54.5 (57.1/50.0)	8.3/6.9	8.0/7.0	Low-fat vegan	Conventional Low-fat	HbA1c reduction was greater in the IG than in the CG. Weight loss and FBG

										significantly decreased only in the IG compared with the CG.

IG, intervention group; CG, control group; *, number of participants with T2D in the study. For all other characteristic variables, the N is 65 (33/32). Ł, number of participants with HbA1c data available. For all other characteristic variables, the N is 291 (142/149). ±, characteristic variables extracted from Kahleova et al., 2011. †, number of participants with HbA1c data available. For all other characteristic variables, the N is 113 (68/45). ‡, characteristic variables were extracted from Barnard et al., 2009.

FINDINGS

Quality of life, psychological and social well-being

Quality of life significantly improved only in the intervention group[35, 41] (p=0.01; p<0.05), and significant improvements in the intervention group in both psychological and physical components summary[44] (p<0.001; p<0.0001) were also reported. The control group showed a significant improvement only in the physical component summary[44] (p=0.03). Significant differences between the two groups in favour of the intervention group were reported for both the psychological and physical component summary[44] (p<0.01; p=0.03). Depression levels dropped and reached statistical significance only in the intervention group[35] (p=0.03). Changes in perceived pain and neuropathy symptoms were reported as pain significantly decreased between groups favouring the intervention group[41] (p=0.04). Also, a significant decline in foot conductance was reported in the control group[41] (p=0.03), suggesting that the intervention might have stopped or slowed down the progress of nerve impairment. Furthermore, statistically significant differences were reported in favour of the intervention group for self-esteem[44] (p<0.01), nutritional efficacy[44] (p<0.0001) and general efficacy[44] (p=0.01).

Overall, the results suggest that a plant-based diet could improve the overall quality of life, psychological well-being and chronic diabetic neuropathy in people with T2D without changes in food enjoyment and diet costs. In addition, the slight increase in electrochemical skin conductance in the intervention group and the significant decline of the control group41 makes plant-based diet intervention promising for further testing in people with painful T2D neuropathy.

Adherence, acceptability and diet behaviour

Five studies[36, 37, 39, 41, 44] reported greater adherence among the participants of the intervention group compared with the control group, while one study[43] showed high adherence among both groups. Also, one study[40] reported complete adherence to the plant-based intervention diet in approximately half of participants (44 per cent). In contrast, Lee et al.[45] reported that the control group reported higher adherence (p=0.002) compared with the intervention group, while the percentage of participants who reported high adherence was significantly higher in the control group compared with the intervention group ($p<0.001$).

Dietary restraint increased to a greater extent only in the control group[35, 37], suggesting that the control groups felt more constrained by their assigned diet than the participants of the plant-based diet groups. Dietary disinhibition decreased significantly only in the intervention group ($p=0.01$) in one study[35], while Barnard et al.[37] reported that it was declined in both groups, suggesting that individuals in both groups were feeling less hungry compared with baseline and they were less likely to overeat as a response to stressful stimuli. Also, no significant differences between the two groups were reported with regard to food acceptability.[37] Within-group analysis demonstrated significant improvement in levels of energy only in the intervention group ($p<0.001$)[37], while the control group reported significant improvement in digestion ($p<0.05$).[37]

Overall, the results showed that even though the plant-based diets were slightly more demanding in initial effort, adherence was greater among those in the intervention groups compared with the control groups, suggesting high rates of acceptability of the plant-based diet among the participants of the intervention groups. In addition, control group diets were more likely to be described as constraining, and as a result dietary restraint was higher in the control groups.

HbA1c and diabetes control

All nine studies provided baseline and end-line measures for HbA1c. In eight studies the decrease of HbA1c was greater among participants in the intervention groups compared with the control groups, while in one study[40] the decrease was similar in both groups. After excluding Wright et al.[44] for reasons of not reporting HbA1c levels specifically for participants with T2D and after performing weighting statistical adjustment, the mean difference among the eight studies that provided specific HbA1c levels for participants with T2D between baseline and end-line measurements shows a decrease of 0.55 per cent in the intervention groups and 0.19 per cent in the control groups. The results suggest that participants in the intervention groups managed to better control their diabetes via the plant-based diet compared with participants in the control groups.

Further analyses of HbA1c levels in two studies[36, 40] among participants whose medication remained unchanged showed a greater decrease of 1 per cent in the intervention group compared with a decrease of 0.2 per cent in the control group in the one study[40] and significantly decreased by 0.9 per cent only in the intervention group (p=0.002) in the other.[36]

In addition, an analysis among participants who reported high adherence showed a greater difference of HbA1c levels between the two groups[45]: a significant within-group decrease of 0.9 per cent in the intervention group (p<0.01) and a significant within-group decrease of 0.3 per cent in the control group (p<0.05). The reported decrease between the two groups was significantly greater in the intervention group compared with the control group among participants of high adherence (p=0.01).[45]

Further medical outcomes

Six studies reported a reduction or discontinuation of diabetes-related medication among participants at end-line.[36, 38, 41, 42, 43, 44] Interestingly, Nicholson et al.[42] mentioned that two intervention group participants on insulin decreased their insulin doses from baseline to end-line. Moreover, three intervention group participants decreased and one discontinued the oral hypoglycaemic treatment.[42] Additionally, two participants in the intervention group discontinued the antihypertensive medication at end-line.[42] In contrast, participants in the control group did not have changes on their medication.[42] Barnard et al.[38] reported that 35 per cent (n=17) of the participants in the intervention group reduced their T2D medication in contrast to 20 per cent (n=10) of the participants in the control group. Kahleova et al.[36] showed that the diabetic medication reduced in 43 per cent of participants in the intervention group and in 5 per cent of participants in the control group. Soare et al.[43] mentioned that from a total of seven participants on oral hypoglycaemic medication in the intervention group, five of them discontinued their medication. In the control group one participant discontinued the oral hypoglycaemic medication treatment.[43] Similarly, Bunner et al.[41] reported that ten participants in the intervention group reduced the glucose-lowering treatment, while in the control group one participant reduced the glucose-lowering medication. Moreover, four intervention group participants decreased the lipid-lowering medication, while no participant reduced it in the control group.[41] Wright et al.[44] reported that two participants with T2D in the intervention group did no longer meet the criteria for T2D diagnosis at end-line.

Two studies reported an increase in diabetes-related medication at end-line[38, 41], and one[45] reported that 14 per cent (n=7) of the participants in the intervention group and 23 per cent (n=12) participants of the control group increased the diabetes medication doses. Bunner et al.[41] showed that two participants in the intervention group and two in the control group increased the glucose-lowering medication. Also, the lipid-lowering medication increased in one intervention group participant and in three control group participants.[41]

Weighting statistical adjustment has been performed for all the mean values that follow. The review indicated a significantly greater weight loss in participants in the intervention groups (mean weight loss was 5.23kg) compared with the control groups (mean weight loss was 2.83kg). [36, 38, 41, 42, 43] Four studies[36, 38, 42, 43] showed a significant decrease in FBG only in the intervention groups, while one study[45] reported a reduction in FBG only in the intervention group but without meeting statistical significance. The mean FBG decrease was 22.91mg/dL in the intervention groups and 11.58mg/dL in the control groups. Total cholesterol declined, with the reduction being greater in the intervention groups (mean decrease was 21.98mg/dL) compared with the control groups (mean decrease was 11.14mg/dL) in four studies[36, 38, 41, 43], of which two[36, 43] reported significant results in favour of the intervention groups ($p< 0.0001$; $p<0.001$). In addition, one study[41] reported an increase in total cholesterol in the control group. LDL cholesterol greatly decreased among participants in the intervention groups (mean reduction was 12.43mg/dL) compared with the control groups (mean reduction was 6.76mg/dL) in five studies[36, 38, 41, 43, 45], of which three[36, 38, 43] showed significant reduction only in the intervention groups ($p<0.05$; $p<0.01$; $p<0.001$). One study[41] reported an increase in LDL among participants in the control group. A greater reduction in triglycerides was reported in the intervention groups (mean decline was 12.86mg/dL) compared with the control groups (mean decline was 5.79mg/dL).[36, 38, 41, 42, 45] One study[38] reported a significant reduction ($p<0.05$) in triglycerides, while two studies[41, 45] reported an increase of triglycerides, of which one[41] showed an increase in both groups and the other[45] showed that triglycerides surprisingly were increased in the intervention group and decreased in the control group. In both studies[41, 45] the results did not reach statistical significance.

DISCUSSION

This systematic review demonstrates evidence that a plant-based diet can significantly improve psychological well-being, quality of life, control of T2D measured by HbA1c and a number of physical characteristics (weight loss, FBG, total cholesterol, LDL cholesterol, triglycerides) in people with T2D.

Three studies reported results with regard to psychological and quality of life outcomes.[35, 41, 44] More specifically, there were significant improvements in the intervention group compared with the control group in depression[35], emotional well-being[44], physical well-being[44] and general quality of life.[35, 41, 44] Further outcomes showed a significant decrease of reported pain among participants in the intervention group.[41] The participants of the intervention groups reported greater psychological results and an improved quality of life in all three studies.

Participants’ adherence was reported in eight of the studies.[36, 37, 39-41, 43-45] Reported adherence was higher among participants of the intervention groups compared with the control groups in four studies.[36, 37, 39, 44] In contrast Lee et al.[45] reported that the control group showed significant higher adherence compared with the intervention group. A potential explanation for this difference might be the absence of weekly workshops, as Lee et al.[45] used only phone consultations, while the four studies with high adherence results in the intervention groups carried out weekly educational sessions. One study reported high adherence in both the intervention and the control groups[43], potentially because education was provided on a daily basis and the RCT was conducted in a supervised environment. Moreover, two of the studies monitored the adherence only in the intervention group and reported high[41] and medium levels of adherence.[40] These results of the systematic review suggest that providing consistent nutrition education can better support people to adapt more effectively to a plant-based diet, as high dietary adherence and compliance is linked with educational interventions.[46-48]

Three studies monitored the diet behaviour and diet acceptability among participants in both groups.[35, 37, 39] Dietary disinhibition significantly decreased in the intervention group, while dietary restraint significantly increased only in the control group.[35] Barnard et al.[37] reported that both diets were equally well accepted by participants in both groups. Kahleova et al.[35] results suggested that the plant-based diet was highly accepted by the participants as the dietary restraint and dietary disinhibition were significantly improved in the intervention group.

With regard to diabetes control, this systematic review demonstrates that a plant-based diet intervention can significantly reduce HbA1c in adults with T2D and potentially reduce diabetes medication. Eight of the included studies reported baseline and end-line HbA1c levels of participants with T2D.[36, 38-43, 45] All eight studies reported a greater reduction of HbA1c levels among participants in the intervention groups compared with the control groups, with an average decrease of 0.55 per cent in the intervention groups and 0.19 per cent in the control groups. This result is consistent with the findings of previous research.[29] Furthermore, findings from six studies reported a reduction or discontinuation of diabetes-related medication in the intervention groups.[36, 38, 41-44]

Five studies reported significant greater weight loss in the intervention group (mean weight loss 6.06 kg) compared with the control group (mean weight loss 2.66 kg) from baseline to end-line.[36, 38, 41-43] Three studies reported significant improvements in FBG levels.[36, 38, 42] Two studies demonstrated a significant decrease in LDL cholesterol levels in the intervention groups[36, 38], while one study showed a decrease in total cholesterol and triglycerides levels.[38] There are studies that have demonstrated that a plant-based diet can significantly lower total cholesterol, LDL cholesterol, triglycerides and the overall risk for CVD.[49-52] This is noteworthy because CVD is one of the main comorbidities of T2D[53, 54] and one of the main causes of premature mortality in the diabetic population.[55-59]

The present systematic review has several strengths. It is the first review, to our knowledge, that attempted to summarise the significant psychological outcomes of a plant-based diet intervention in adults with T2D. Furthermore, the included CTs conducted in several different countries (Czech Republic, Italy, New Zealand, South Korea and USA), which suggests that generalisability of the findings in the UK setting is likely. Also, by reviewing CTs which focus on dietary patterns and not isolated nutrients makes the findings of the review easier to be applied to the general population. Finally, when plant-based diets were compared with official guidelines from a number of countries, the plant-based diet was found to be superior. Although this is a preliminary review of evidence specific to people with T2D, other research which includes but is not specific to people with diabetes supports the psychological findings.[60, 61]

This systematic review also has limitations. The included studies had rather small sample sizes, although there were adequate to estimate significance levels. Another limitation is that two of the studies were not randomised.[39, 40] In addition, adherence in CTs regarding diet is difficult to be followed and measured by researchers because is highly dependent on participants' recalls, which might be inaccurate.

CONCLUSIONS

Based on the evidence of the research analysis by this systematic review, it can be concluded that plant-based diets accompanied by educational interventions can significantly improve psychological health, quality of life, HbA1c levels and weight and therefore the management of diabetes. Furthermore, plant-based diets could potentially improve diabetic neuropathic pain and the levels of total cholesterol, LDL cholesterol and triglycerides in T2D.

There is further need of studies to explore the relationship between psychological health, dietary patterns/behaviour and diabetes control. Future studies could explore ways of delivering proper nutritional education in order to support participants to follow healthier dietary patterns.

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2. Burnout in Greek mental health professionals: a behavioural change intervention

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ABSTRACT

Objective: Burnout interventions have suggested that there is an association between high job satisfaction levels and improvement in burnout symptoms. The aim of this study is to develop and implement a burnout intervention for mental health professionals, test the relationship between the level of burnout and job satisfaction, and clearly identify the benefits of such an intervention.

Research design and methods: This is a cross-sectional design approach and was employed in order to investigate the desired variables at two different time points over a period of one month amongst 43 mental health professionals.

Results: The scores for burnout among the mental health professionals were significantly lower after the intervention compared with the burnout scores before the intervention. Significant correlations between burnout and job satisfaction were found before and after the intervention. The variables which were found to be correlated were participants' age and number of years working at the clinic and burnout scores before and after the intervention. In addition, a strong positive correlation was found between age and number of years working at the clinic.

Conclusions: Individual levels of burnout significantly decreased after the intervention, thus supporting the initial research hypothesis and providing evidence that demonstrates the efficacy of the behavioural change intervention. However, the success of the intervention was somewhat limited in that it did not improve levels of job satisfaction, and moreover, no significant relationship between job satisfaction and burnout was found.

Keywords: burnout, job satisfaction, Greece, recession.

INTRODUCTION

Definition and impact of burnout

Burnout is defined as the psychological syndrome that emerges as a prolonged response to multiple chronic interpersonal job-related stressors (Maslach & Leiter, 2016). It has also been recognised as an occupational hazard for various groups of professionals who mainly interact with other individuals (e.g. healthcare professionals).

The symptoms of burnout might be psychological and physical with the most predominant ones being: chronic fatigue; headaches; gastrointestinal disorders; muscle tension and musculoskeletal pain; hypertension; sleep disorders; anxiety; acute stress; eating disorders; and sexual dysfunction (Maslach & Leiter, 2016; Tyler & Cushway, 1998).

When job-related stressors are accumulated over a period of time occupational burnout might occur and manifest itself in overwhelming exhaustion, detachment from work and decreased sense of work effectiveness and accomplishment, and feelings of cynicism (Maslach & Leiter, 2016). This multi-dimensional model describes burnout as an individual stress experience which occurs in a social context and involves the person’s perception of self and others (Maslach & Leiter, 2016; Maslach, 2002). The exhaustion dimension is known as the individual stress dimension of burnout and has been described as loss of energy, fatigue, debilitation and physical and emotional depletion (Maslach & Leiter, 2016; Maslach, Schaufeli & Leiter, 2001). The cynicism dimension is known as the interpersonal dimension of burnout and includes withdrawal, loss of idealism, inappropriate behaviour towards clients and increased irritability (Maslach & Leiter, 2016; Maslach, 2002). The work ineffectiveness dimension is known as the self-evaluation dimension of burnout and includes feelings of low spirit, inability to cope with work and diminished productivity (Maslach & Leiter, 2016). Cynicism and exhaustion are likely to have adverse effects on the person’s sense of accomplishment resulting in depleted motivation and feelings of inadequacy and incompetency to carry out their job that could potentially lead to depression (Haryanto, 2018; Maslach, 2002). Feelings of ineffectiveness could further lead to job strain which is a form of psychosocial stress that occurs in the person’s workplace and is characterised by low level of control regarding one’s job (Kivimaki et al., 2012). Subsequently that could further enhance the chances for burnout as job strain increases significantly the chances of mental health development (Organisation for Economic Co-operation and Development, 2012).

Job Satisfaction

Job satisfaction can be defined as the positive or negative evaluation people make about their job or general job situation and is typically viewed as global satisfaction with the job or satisfaction with aspects of the job (e.g. salary, supervisors, future opportunities) (Weiss & Merlo, 2015; Lease, 1998). In addition, job satisfaction is viewed as the degree of a worker's affective orientation towards the job roles occupied in the organisation and has been associated with similar contributory factors as burnout (Lease, 1998). Evans et al. (2006) suggest that low job satisfaction is directly associated with low decision latitude, excessive job demands and concerns of workplace.

Literature demonstrates a negative correlation between burnout and job satisfaction whereby high levels of burnout are associated with low levels of job satisfaction. Kroupis et al. (2017) report that job satisfaction among Greek teachers is negatively correlated with emotional exhaustion which is considered the main aspect of burnout (Rohland, Kruse, & Rohrer, 2004; Maslach, Jackson, & Leiter, 1996). A study among mental health workers suggests that employees who experienced fewer burnout symptoms reported a greater feeling of personal accomplishment while the employees with high levels of job satisfaction were less likely to leave their work (Salyers, Rollins, Kelly, Lysaker, & Williams, 2013). Ogresta, Rusac, and Zorec (2008) suggest that job satisfaction and occupational stress are predictors of burnout among mental health workers. In line with these findings, Tsigilis, Zachopoulou, and Grammatikopoulos (2006) report that job satisfaction is a significant predictor of emotional exhaustion (and therefore burnout) and that low emotional exhaustion levels were associated with increased job satisfaction. Furthermore, Ozyurt, Hayran, and Sur (2006) suggest that job satisfaction is negatively correlated with emotional exhaustion and cynicism and positively correlated with the feeling of personal accomplishment at work. Moreover, they report that the most significant and common predictor of both job satisfaction and burnout is the number of holidays (Ozyurt et al., 2006). It can be concluded that, compared with those with higher reported levels, individuals with low job satisfaction level are potentially susceptible to cognitive withdrawal from their job and organisation and more receptive and vulnerable to the stress of their working environment.

Maslach et al. (2001) mention that although the correlation is not large enough to conclude that the two concepts are identical, they are clearly linked. However, there are concerns in regards to the nature of that link and causality and whether burnout and job satisfaction are indirectly linked through another factor (e.g. poor working conditions) (Maslach et al., 2001).

The above research findings demonstrating the potential role of job satisfaction in the development of burnout might have important organisational implications. Employers might need to develop and implement burnout interventions as a means to improve employees' job satisfaction and therefore to reduce/manage their burnout symptoms.

The financial cost

Burnout has been linked with several forms of job withdrawal like absenteeism, actual turnover and intention to change job (Kroupis et al., 2017). Depression and other mental health conditions are one of the leading causes of work disability globally. According to the Organisation for Economic Co-operation and Development (2012) approximately the 20% of the working-age population faces a mental health disorder. In the UK for working-age adults, the proportion of common mental health symptoms remained stable between 2000 and 2014 but the prevalence of severe mental health symptoms has increased 9.3 per cent in 2014 (Mental Health Foundation, 2016). Mental health conditions influence sickness absence days more than any other variable with an approximate 12.1 extra number of days (Organisation for Economic Co-operation and Development, 2012). Therefore, people's job absenteeism in one hand and presenteeism on the other, both increase sharply as a result of poorer mental health. The percentage of persons who have been absent from work in 21 European countries in the past month is approximately 28 per cent (for moderate mental health conditions) and 42 per cent (for severe mental health conditions) (Organisation for Economic Co-operation and Development, 2012). In the UK in 2015 the number of working days of sick leave as a result of mental health issues was approximately 17.6 million days, or the 12.7 per cent of the total sick days taken (Mental Health Foundation, 2016). In addition, unemployment levels are higher for people with mental health conditions (Organisation for Economic Co-operation and Development, 2012).

In the sixty-fifth World Health Assembly forum (2012) it was reported that mental health problems account for 13 per cent of the total global burden of disease while it is projected that by 2030 mental health conditions and depression in particular, will be the leading cause of mortality and morbidity worldwide. It is estimated that in the UK the wider costs of mental health problems to the UK economy are £70 to 100 billion per year, approximately 4.5 per cent of gross domestic product (Mental Health Foundation, 2016). Moreover, the annual cost of lost employment per employee in England in 2006 was about £7,000 due to depression and £7,000 due to anxiety (Mental Health Foundation, 2016). It is evident that mental health issues place emotional and financial costs to individuals, their families and society as a whole and subsequently a great burden on states' funds (Mental Health Foundation, 2016; Rossler, 2012). Professionals (e.g. mental health workers, psychologists, nurses, psychiatrists) who are exposed to work-related stressors that could lead to burnout are more susceptible to the development of other mental health conditions.

Greece's burden

The last ten years the Greek economy has been facing the greatest difficulties of its post-World War II period as a result of the deep and ongoing economic recession started in 2008. One of the sectors that faced major cuts was the public healthcare system as it was one of the priority areas for reforms and cuts in public spending. In 2013, the annual state spending on health had reduced by more than €5 billion compared with 2009; this counts of a reduction of almost a third (Organisation for Economic Co-operation and Development, 2015). Between 2009 and 2015 there is a reduction of €8.5 billion in healthcare in Greece and there is prediction for further cuts in the future (Deloitte, 2017).

In Greece, almost the 50 per cent of employees reported that job-related stress is a contributing factor of their mental health and affects their general health condition (Anagnostopoulos & Niakas, 2010). In addition, Greece reports the worst outcomes in Europe in regards to stress levels affecting workers' health that could lead to symptoms of burnout and/or depression (Anagnostopoulos & Niakas, 2010). Depression is being considered the main mental health condition that is linked to suicides with approximately 30 per cent of the people who had committed suicide in Greece were suffering from depression (Giotakos, Tsouvelas, & Kontaxakis, 2012). Rachiotis, Stuckler, McKee, and Hadjichristodoulou (2015) report a clear increase in suicide rates among persons of working age, coinciding with the imposition of austerity measures. More specifically, the suicide rates increased by 35 per cent between 2010 and 2012 (Rachiotis et al., 2015). Approximately 8 out of 10 of committed suicides in Greece are related to mental to mental health issues (Giotakos et al., 2012).

The rising prevalence of mental health issues among the general Greek population (Skapinakis et al., 2013) is likely to increase the number of people seeking primary and secondary care. This in turn means that a greater workload will be potentially put on healthcare staff who have already been working under major budget cuts these years. Moreover, there are serious problems stemming primarily from staff shortages and resources difficulties that healthcare workers have to deal with (Christodoulou, Ploumpidis, Christodoulou, & Anagnostopoulos, 2010) and therefore make healthcare staff vulnerable to the development of burnout syndrome that could subsequently lead to increased turnover and decreased productivity. There is a need to identify risk factors for burnout among healthcare workers so that the likelihood of burnout can be potentially minimised. In addition, there is further need to develop cost-effective interventions that are feasible in times where state funding and resources allocation are low.

Objectives

The aim of this study is to develop and implement an intervention for burnout for Greek mental health professionals. A rehabilitation intervention was used and aimed to cause behavioural change through increased perceived control for the mental health professional. The intervention comprised strategies of stress and time management techniques and psychoeducation in order to raise awareness of burnout among the employees. Furthermore, the intervention aimed to increase job satisfaction among employees. It was hypothesised that participants will score higher in burnout levels before the implementation of the intervention compared to their burnout scores after the completion of the intervention. A second hypothesis was that there will be a negative correlation relationship between burnout and job satisfaction. Higher scores in job satisfaction will be associated with lower scores in burnout.

METHODS

A cross-sectional design approach was employed in order to investigate the desired variables at two different time points over a period of one month. The intervention for burnout is the independent variable of the study while the levels of burnout and job satisfaction among the participants were the dependent variables.

Participants

Participants were recruited through opportunistic sampling from two mental health institutions in Athens, Greece named *Iris* and *Attiki* respectively. Recruitment flyers were given to the managers of both clinics in order to pass them to the staff. The individuals who expressed an interest to participate in the study were given envelopes that included information sheets, questionnaires and consent and debriefing forms. In addition, contact details were passed to the individuals in order to contact the researchers for further enquiries in regards to the study. Out of the 94 employees of the two clinics, 43 agreed to participate in the study.

Measures

Maslach Burnout Inventory (MBI)-Greek version

The MBI is an introspective inventory consisting of 22 items pertaining to occupational burnout. It is designed for professionals who work in human services who are focussed on supporting and assisting people, offering guidance, preventing harm and ameliorate physical, emotional and/or cognitive problems. The MBI assesses the emotional exhaustion, depersonalisation and reduced personal accomplishments. Participants have to complete a seven-point scale from zero (never) to six (every day) and state how often in the period of the last twelve months they have experienced the described feeling with regards to their job. The Greek version of MBI has demonstrated good reliability and validity.

Job Satisfaction Survey (JSS)

The JSS is a 36-item, nine facet scale and measures employee attitudes about their job and aspects of it. Each of the nine facets has 4 items to measure and participants have to complete a six-point scale from one (disagree very much) to six (agree very much).

Educational handout

As part of the intervention an educational handout about burnout has designed and issued to each participant. The handout included information about the nature of burnout, causes and symptoms of burnout, treatment of burnout and prevention of burnout.

Demographic questionnaire

The demographic questionnaire requested information about participants' age, gender and number of years working at the clinic.

Intervention

The intervention process consisted of three parts: (1) the informative workshop for the clinics' managers; (2) the psychoeducational workshop for the mental health professionals, and (3) the educational handout. The workshop took place from 09:00 until 16:00 in *Iris* clinic premises and involved participants from both clinics. It carried out by the researchers accompanied by an organisational psychologist and a mindfulness-based therapist, and was divided into three main parts. In the first part, the researchers informed participants about the nature of burnout, its symptoms and ways of addressing it. Furthermore, participants learnt about the benefits of recognising, accepting and dealing with burnout syndrome. The second part consisted of two reflective groups during which participants were able to discuss and address with the clinics' managers potential issues and conditions that affect their work performance. Through the reflective practice participants and managers worked collectively in order to suggest ways of improvement. In the third part, participants were taught mindfulness, relaxation and breathing techniques by the mindfulness-based therapist in order to be better equipped when facing stressful and anxious events at work. In addition, time management strategies were suggested to participants by the organisational psychologist in order to be more efficient in managing their activities at work and consequently reduce their anxiety and stress levels.

Confidentiality and encoding

Collected data was used for the purposes of the study only and stored securely in a password protected computer. The identities of participants were kept anonymous. Consent form, demographic form, MBI and JSS questionnaires were placed into a numbered envelope.

The questionnaires were encoded in order to be able to match participants' responses before and after the intervention. After the initial completion of the questionnaires before the intervention, participants were asked to remember their envelope number for post-intervention completion. In addition, participants were asked to place the answered questionnaires in the envelope and seal it for privacy purposes. The encoding for the *Iris* clinic was A1, A2, A3, etc while for the *Attiki* clinic was B1, B2, B3, etc.

Consent forms and information sheets were given to all the participants. Participation in the study was voluntary and therefore no individual was forced to participate. In addition, the right to withdraw from the study if they wish to do so without providing any explanation was specifically underlined. Every participant was fully informed of the aims and objectives of the research and was given a consent form to read and sign prior to intervention. Participants were provided with the researchers' contact details in case they had any additional questions or concerns at any stage of the research process.

RESULTS

The questionnaires of MBI and JSS were scored for each participant before and after the intervention. This data along with the demographic information was entered in the Statistical Package for the Social Sciences (SPSS) for statistical analyses. Descriptive statistics were employed to gather means of demographic data (age, number of years working at the clinic) and gender distribution. Paired sample t-tests were used to compare both burnout and job satisfaction scores before and after the intervention. In addition, independent t-tests were used to compare burnout for males and females before and after the intervention. To investigate the linear relationship between burnout and job satisfaction, Pearson's correlation test was utilised for scores before and after the intervention. Inter-correlations between age, number of years working at the clinic and the above variables were examined via the same analyses as well. Two separate multiple regression analyses were carried out to examine age, numbers of years working at the clinic and job satisfaction as potential predictors of burnout syndrome. One regression analysis carried out before the intervention and one more after the intervention.

Demographic information

Overall, 43 individuals participated in the study of which 22 were males and 21 were females (please see Table 1). The mean age of participants was 35 years (34 years for males and 36 years for females). The mean number of years working at the clinic for all participants was 8.79 years (7.81 years for males and 9.81 for females).

Table 1: Means and standard deviations (SD) of demographics

Gender		Age (years)		Number of years working at the clinic	
	(N)	Mean	(SD)	Mean	(SD)
Male	22	34	6.70	7.81	5.47
Female	21	36	7.69	9.81	6.65
Total (N)	**43**	**35**	**7.21**	**8.79**	**6.09**

Burnout

The paired samples t-test showed that the scores for burnout among the mental health professionals were significantly lower after the intervention compared to the burnout scores before intervention t(42)=4.29, p=0.00 (please see Table 2). The independent t-tests revealed no significant differences between males and females in burnout scores before [t(41)=1.38; p=0.18] or after the intervention [t(41)=0.99; p=0.325] (please see Table 2). Although there was no statistical significance, the male participants reported higher scores of burnout than their females colleagues both pre and post intervention.

Table 2: Means and standard deviations (SD) of burnout scores

Gender		Burnout scores pre-intervention		Burnout scores post-intervention	
		Mean	(SD)	Mean	(SD)
Male	22	77.68	32.27	64.23	26.80
Female	21	65.52	24.88	56.95	20.55
Total (N)	**43**	**71.74**	**29.21**	**60.67**	**23.95**

Job satisfaction

The paired samples t-test showed no significant difference of participants' job satisfaction scores before and after the intervention [t(41)=-1.42; p=0.16] (please see Table 3). Similarly, the independent t-tests revealed no significant difference between male and female workers in job satisfaction scores before [t(41)=-1.16; p=0.25] or after the intervention [t(41)=-0.16; p=0.87] (please see Table 3). Female staff reported higher scores of job satisfaction than their male colleagues before and after the intervention but these results did not meet statistical significance.

Table 3: Means and standard deviations (SD) of job satisfaction scores

Gender		**Job satisfaction scores pre-intervention**		**Job satisfaction scores post-intervention**	
		Mean	**(SD)**	**Mean**	**(SD)**
Male	22	90.27	44.82	112.59	102.62
Female	21	105.05	38.38	116.48	39.01
Total (N)	**43**	**97.49**	**41.97**	**114.48**	**77.41**

Correlations

Significant correlations between burnout and job satisfaction was found before (r=-0.031; p>0.05) and after the intervention (r=0.02; p<0.05). The variables which were found to be correlated were participants' age and number of years working at the clinic and burnout scores before and after the intervention. A strong positive correlation was found between age and number of years working at the clinic: as age increased the number of years working at the clinic significantly increased as well (r=0.981; p<0.01). The scores of burnout before and after the intervention showed a strong positive correlation as well (r=0.815; p<0.001).

Table 4: Correlations for age, numbers of years working at the clinic, burnout and job satisfaction pre and post intervention

	Age	Number of years working at the clinic	Burnout pre-intervention	Burnout post-intervention	Job satisfaction pre-intervention	Job satisfaction post-intervention
Age	-	0.981	-0.006	0.05	0.015	-0.131
Number of years working at the clinic	-	-	-0.062	0.016	0.007	-0.128

Burnout pre-intervention	-	-	-	0.815	-0.031	0.008
Burnout post-intervention	-	-	-	-	-0.023	0.02
Job satisfaction pre-intervention	-	-	-	-	-	0.243
Job satisfaction post-intervention	-	-	-	-	-	-

Burnout prediction

The multiple regression analysis showed that age, numbers of years working at the clinic and job satisfaction scores before the intervention as a model did not significantly predict burnout scores [$R^2 = 0.085$; F (3,39) = 1.21; p = 0.317] (please see Table 5). Exploring independent predictors, numbers of years working at the clinic and age of participants almost reached statistical significance. Number of years working at the clinic negatively predicted burnout (t=-1.898; p=0.065) and age positively predicted burnout (t=1.855; p=0.071).

Table 5: Multiple regression analysis of age, number of years working at the clinic and job satisfaction (pre-intervention) as potential predictors of burnout (pre-intervention)

Predictor	Burnout (MBI score) pre-intervention		
	B	**B**	**t**
1) Age	5.94	1.47	1.86
2) Number of years working at the clinic	-7.193	-1.49	-1.90
3) Job satisfaction pre-intervention	-0.030	-0.043	-0.278
	R^2=0.085; F(3,39)=1.21; p=0.317		

The second multiple regression analysis for post-intervention scores that used age, number of years at the clinic and job satisfaction scores as a model showed no significant prediction for burnout (please see Table 6). In addition, none of the variables were found to be significant independent predictors of burnout scores after the intervention.

Table 6: Multiple regression analysis of age, number of years working at the clinic and job satisfaction (post-intervention) as potential predictors of burnout (post-intervention)

Predictor	Burnout (MBI score) post-intervention		
	B	**B**	**t**
1) Age	2.99	0.899	1.12
2) Number of years working at the clinic	-3.39	-0.862	-1.06
3) Job satisfaction post-intervention	0.009	0.028	0.177
	$R^2=0.031$; F(3,39)=0.418; p=0.74		

DISCUSSION

The present study took place at two mental health clinics in Athens, Greece and primarily aimed to test the efficacy of a behavioural change intervention to educate staff about burnout syndrome, improve current levels of burnout among the staff, and increase job satisfaction levels. Subsequently, the relationship and correlation between burnout and job satisfaction was investigated. In addition, the age of participants and the number of years they have been working at each of the clinics were examined alongside their job satisfaction as predictors of burnout. Gender differences in levels of burnout and job satisfaction were explored as well.

The main finding of our study was that individual levels of burnout significantly decreased after the intervention, thus supporting the initial research hypothesis and providing evidence that demonstrates the efficacy of the behavioural change intervention. The intervention, which had a rehabilitation approach, targeted perceived staff control as an area of mismatch. This mainly comprised of a participatory strategy whereby participants were given the opportunity during the workshop to work together and cooperate with managers from their workplace in order to address, identify and explore organisational stress and anxiety factors that affected their job. Through this incorporated approach, participants were given a role in organisational decision-making which made them feel more in control of their job and more listened to by their managers (Mikkelsen & Gundersen, 2003). In addition, such cooperation between the staff and managers might have served as a constructive social interaction, leaving participants feeling more supported and a greater sense of belonging within their work environment. Therefore, this aspect of the intervention might have improved potential community mismatches.

The psychoeducational workshop offered relaxation, breathing, mindfulness and time management techniques by specialists which might have equipped participants with coping skills and strategies that enabled them to better manage the psychological stress that leads to burnout. Furthermore, the psychoeducational part of the workshop and the educational handout might have contributed as well to the reduction of burnout levels by enabling the recognition of symptoms in participants who might have been unaware of and providing participants with the knowledge to know how to seek appropriate support to better manage their symptoms of burnout. Literature suggests that psychoeducation is an important tool to support people in dealing with their mental health and physical conditions and might offer significant improvements (Yuniartika, Dwidiyanti, & Mu'in, 2016; Backstrand, 2015; Pibernik-Okanovic et al., 2015; Tursi, Baes, Camacho, Tofoli, & Juruena, 2013; Van Daele, Hermans, Van Audenhove, & Van den Bergh, 2012).

The success of the intervention in the present study has also been replicated in other studies. Hatinen, Kinnunen, Pekkonen, and Kalimo (2007) for example, found a similar employee rehabilitation approach to improve the levels of depersonalisation and emotional exhaustion through increasing perceived job control. In addition, research on support workers has suggested that levels of burnout decrease through an increase in perceived control over decisions that are made (Miller, Ellis, Zook, & Lyles, 1990). These results are contrary to other studies (Iancu, Rusu, Maroiu, Pacurar, & Maricutoiu, 2018; Maricutoiu, Sava & Butta, 2016). Iancu et al. (2018) in their meta-analysis of 23 burnout interventions report that interventions aiming to reduce burnout have a generally lower level of effectiveness. Moreover, they report that existing interventions are effective for emotional exhaustion and personal accomplishment while with regard to cynicism the effectiveness of these interventions is almost null (Iancu et al., 2018).

However, the moderate success of the intervention was somewhat limited in that it did not improve levels of job satisfaction, and no significant relationship between job satisfaction and burnout was found. This finding implies that job satisfaction is irrelevant in the prediction, prevention or management of burnout. Furthermore, components of mismatch such as job control and community (which were addressed in the intervention) were ineffective at improving, and perhaps not so relevant to job satisfaction. Thus, burnout scores improved regardless of the fact that job satisfaction did not, suggesting that the two factors are independent from each other. This finding is in contrast with other studies that suggest a direct link between burnout and job satisfaction (Kroupis et al., 2017; Salyers et al., 2013; Ogresta et al., 2008; Ozyurt et al., 2006; Tsigilis et al., 2006). Moreover, previous research has demonstrated a significant negative association between burnout symptoms and job satisfaction, with a large effect size (Niebrugge, 1994; Mirsalimi & Roffe, 1991). A study by Innstrand, Espnes, and Mykletun (2004) employed a similar intervention found that employees who had undergone the provided intervention had experienced a significant reduction in emotional exhaustion as well as an increase in job satisfaction.

With respect to the present study, it may be the case that: (1) the short time span between the intervention and participant completion of the job satisfaction questionnaire at post-intervention, did not allow sufficient time for the effects of the intervention to be present (Innstrand et al., 2004); (2) the questionnaire used to measure job satisfaction did not provide adequate means of measuring this variable; (3) other methodological flaws in the design meant that results failed to reach significance, or (4) the intervention addressed areas of mismatch which are relevant to burnout (e.g. control), but not so much to job satisfaction.

Job satisfaction might be related to other variables which were not addressed in the intervention (e.g. values, fairness at workplace, rewards, job expectations). Literature suggests that work-related emotional exhaustion, stress, anxiety, anger, frustration, withdrawal and turnover could be a result of unmet job expectations that subsequently contribute to lower levels of job satisfaction (Ng & Feldman, 2014; Proost, van Ruysseveldt & van Dijke, 2012; Worsley et al., 2009; Houkes, Janssen, de Jonge, & Bakker, 2003; Lee & Ashforth, 1996).

The result that males and females did not significantly differ in levels of burnout or job satisfaction is perhaps not surprising in light of previous literature which has generally failed to establish clear findings on the gender aspect (Maslach et al., 2001) and any differences that have been found have been attributed to the gender segregation of occupation (Maslach, 1982). With respect to age and number of years worked at each of the clinics, a lack of correlation with burnout is slightly more unexpected. Age in particular has been most frequently associated with burnout and is confounded with work experience, suggesting that burnout appears to be more of a risk early on in people's working career and therefore a negative correlation between the number of working years and burnout could be expected (Maslach et al., 2001). Research suggests that young healthcare workers experience greater levels of burnout (Anagnostopoulos & Niakas, 2010; Antoniou, 1999).

Possible alternative individual factors (as predictors of burnout) to be examined in future research include marital status, level of education and/or level of training. However, Maslach et al. (2001) demonstrates that individual factors do not warrant the same magnitude of correlation as organisational, occupational or job characteristics and therefore the examination of these situational variables may be a more possible cause.

Limitations

There were several limitations in the present study which are likely to have impacted the reliability and validity of the findings. Firstly, the study used a cross-sectional design which does not allow inferences to be made about causation (Anagnostopoulos & Niakas, 2010). Changes in levels of burnout for example, might not be attributable to the intervention but to other extraneous variables (e.g. participants might have been experiencing a particularly stressful period before the intervention) and changes in burnout levels might have simply coincided with the post-intervention period.

The Maslach Burnout Inventory and Job Satisfaction Survey are both self-report measures which are open to subjectivity and can therefore be inaccurate. However, Kilfedder, Power, and Wells (2000) argue that since burnout is an employee's experience of what they perceive to be a mismatch between demands and availability of resources to meet those demands, subjective reporting is crucial.

It should be noted that the present study examined the three components of burnout collectively as one entity, whereas previous research has separated emotional exhaustion, depersonalisation and reduced personal accomplishment and investigated them as individual elements. This is with good reason considering that these three symptoms respond differently to intervention (van Dierendonck, Garssen, & Visser, 2005). Generally, emotional exhaustion decreases with intervention but cynicism and low levels of personal accomplishment can be harder to combat.

The sample population used a diverse range of healthcare professionals including physicians, psychiatrists, nurses, healthcare assistants, and psychologists. This is likely to have resulted in various different patterns of relationships between burnout and job satisfaction and other predictor variables. Moreover, it may have caused a variety of different burnout levels at both pre- and post-intervention as the different roles experience different stressors, and also have different levels of control over their work (Lee, Lim, Yang, & Min Lee, 2011). As such, prospective studies would benefit from using a homogenous sample of healthcare professionals (e.g. nurses only).

CONCLUSIONS

The results of the current study have potentially significant implications. During an economic crisis for Greece, the scope to improve mismatches such as overwhelming caseloads, workloads and rewards (e.g. salaries) is almost non-existent, in fact workloads are only going to increase and salaries are already being reduced; thus, worsening the risk of burnout for professionals in the field of healthcare. Therefore, efforts to reduce burnout should be targeted towards more feasible options. A prospective study to investigate other areas of mismatch such as values, fairness and/or reward as predictors of job satisfaction could be considered essential. An intervention which aims to tackle these areas of mismatch might be better suited to address employee job dissatisfaction. As demonstrated in the present study, employee job control can be increased through collaboration with work colleagues and organisational representatives. Furthermore, this also provides a form of social interaction and a sense of belonging. Adequate training in stress and time management is an effective means of reducing long term stress. In addition, organisational interventions could be a cost-effective way of raising awareness of the syndrome in an attempt to prevent its development or exacerbation.

Contributors AT and ACK designed the study. AT and ACK collected data and conducted data analysis. AT wrote the manuscript. ACK made substantial contributions to the identification of relevant

literature, the interpretation of findings and were involved in drafting the manuscript and revising it critically. All authors have approved the publication of the manuscript.

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Section D: Professional practice (competencies)

Unit 1: Generic professional practice

Unit 2: Consultancy

Unit 3: Behaviour change intervention

Unit 4: Teaching and training

Unit 1: Generic professional practice

INTRODUCTION

In this section, I will describe my professional practice working as a trainee health psychologist over a period of two years in different services and organisations. An account of the skills I developed in specific areas include: providing consultancy; designing and delivering teaching and training; implementing behaviour change interventions; planning and conducting research; and applying psychological ethics and principles to my work. I will be reflecting on my professional as well as my personal development over the past two years as a trainee health psychologist.

PLACEMENT AND ROLE

During my two years of practice as a trainee health psychologist I was at West London Mental Health NHS Trust (WLMHT) and my placement started in September of 2015. I was part of the Psychology Department team which involved working in four adult mental health wards and one older people's services ward. In addition, I was also working alongside the Ealing Crisis and Assessment Treatment (ECAT) team.

As a trainee health psychologist, I developed a great interest in the emotional and psychological well-being of individuals with physical illnesses. Through my work at WLMHT these two years I have developed both on a personal and professional level. Although I had some experience of working on a one-on-one basis with clients and being in contact with clients in my previous roles (e.g. assistant psychologist), it was the first time that I was responsible for the whole course of treatment of clients through assessment, formulation and delivery of necessary psychological interventions tailored to each individual's needs. It was also the first time that I was directly involved in the treatment plan of clients with complex psychological and physical health issues. That provided me with the opportunity to adopt a more spherical and holistic approach as a healthcare professional; my approach was focused not only on one's psychological symptoms but also on any comorbid physical issues. I learnt that by taking into consideration every aspect of a client's life you can offer and deliver better services as a health psychologist.

Whilst working as a trainee health psychologist with the Psychology and ECAT team, I had the opportunity to work with individuals with a wide range of physical conditions (e.g. diabetes, obesity, coronary heart disease, chronic obstructive pulmonary disease, rheumatoid arthritis, chronic pain), which were often comorbid with neurological degenerative and psychological conditions such as dementia, Parkinson's disease, anxiety, depression, bipolar affective disorder, schizophrenia, attention deficit hyperactivity disorder, PTSD, and personality disorders. In the early stages of my placement my supervisor assisted me in familiarising myself with the academic literature regarding the most common condition that I would come across during my placement (depression comorbid with chronic physical conditions like diabetes). After a while I had cultivated the ability to conduct independent research about different psychological and physical conditions and different ways of treatment. My clinical supervisor's guidance on this was extremely helpful. The populations that I worked with mostly were people with diabetes comorbid with depression and individuals who had sustained serious psychological and physical trauma (e.g. war, tortured, sexual abuse). This made me develop a greater interest in diabetes condition and in negative effects of working with clients' trauma that psychologists experience. My research focused on exploring the effects of exposure to clients' traumatic disclosures on psychologists in the NHS and I also conducted a thorough systematic review in the management of T2D through a plant-based diet.

Whilst working in adult mental health and older people's service wards I learnt how to carry out neuropsychological testing and how to critically evaluate the meaning of test results and possible psychological causes of individual behaviour. In order to be able to carry out and deliver a variety of different neuropsychological tests I had been shadowing my clinical supervisor whilst she was conducting numerous neuropsychological tests and we always followed that up with extensive supervision. Through extensive shadowing and supervision, I began to gain a clear understanding in how to appropriately conduct the right sequence of tests in order to explore the needed field (e.g. memory, cognitive functioning).

I gained experience in designing and facilitating therapy and psychoeducation groups for different populations and I was interested in preventive psychological approaches as well as the cost effectiveness of such interventions. Whilst working within the Psychology Department I was also responsible for designing and conducting the research of several intervention projects, for example the psychological needs of people with diabetes alongside therapeutic treatment techniques and approaches for people who have experienced traumatic events. In the first project, my role involved designing the psychological treatment and intervention and gathering national data of people experiencing mental health issues along with the management of their diabetes. For the purpose of the second project I conducted a literature review of effective trauma treatment currently available in the UK and then with the assistance of my clinical supervisor we put together a service handbook for treating trauma. By participating in such internal research projects, I built and expanded my knowledge in conducting research and statistical analysis, multivariate techniques such as regression analysis, and interpretation of results. In addition, I was able to work in one-on-one supportive and therapeutic sessions; participate in ward rounds; professional meetings; clinical supervision sessions, and facilitate reflective practice groups. I facilitated a *'Reminiscence'* group for older people that aimed to alleviate the depressive symptoms of dementia. I had also co-facilitated alongside my clinical supervisor a therapeutic *'Mood'* group for adults with bipolar affective disorder and depression. I was also the facilitator of a group for people who were battling their alcohol dependence and were in the detoxification stage. In addition, I had the opportunity to run reflective practice groups for staff of each of the trust's wards.

The main psychological frameworks I have worked with the last two years are the cognitive behavioural therapy (CBT), cognitive neuropsychological, psychodynamic, and the person-centred model. During my work as a trainee health psychologist, I have learnt to appreciate the importance of taking into consideration different demographic and personal factors which made me aware of the need to adopt different psychological approaches and techniques while working with different populations.

As a member of the ECAT team I have gained the capacity to provide psychological and risk assessments in constrained and difficult conditions (e.g. domiciliary visits) and to identify Adult Protection and Child Protection issues on time. My work at WLMHT enriched my experience and skills and equipped me with invaluable tools and knowledge to work with different populations as a future health psychologist.

Part of my role at WLMHT was to maintain the confidentiality of the clients, write formal reports in regards to psychological assessment outcomes, and enter notes in the central WLMHT's computerised system named RiO. For these reasons it was of utmost importance to demonstrate awareness of the Data Protection Act. At the initial assessment with each client I ensured confidentiality was addressed in a clear and understandable manner. I was able to develop skills and experience of managing small and large databases, and issues around research and information governance. I became very aware of data hygiene issues, data security and how to manage a database accessed by several users. Furthermore, I became aware of the need for protocols and systems around data entry, and strategies to minimise missing data.

Working at WLMHT also helped me to become acutely aware of the legal, professional and ethical guidelines as outlined in the Health and Care Professions Council's standards of conduct, performance and ethics, and the British Psychological Society's code of conduct. I ensured that the ethical principles were followed during my work by constantly reflecting and reviewing my work while practising and researching. I made sure that I was actively listening to clients and offering a collaborative approach to care. I also ensured that the clients understood the circumstances of their referral to the Psychology Department and that they had a full understanding of the available treatment options. During my research, I explained to all the participants that they could withdraw from the study at any time without further involvement. In addition, my understanding of the NHS procedures was further developed in relation to safeguarding procedures, NHS policies, and NICE guidelines. I also tried to promote WLMHT's values of togetherness, responsibility, excellence, and caring and maintained the high standards of care that the hospital offers within my role on a daily basis. In addition, I made sure to be respectful and carrying towards every client, colleague and staff I was in contact with.

I believe that my training at the WLMHT strongly aided me in developing my research skills as a trainee health psychologist. My role involved research analysis and synthesis in relation to mental health and chronic conditions. I was assigned to a number of different research projects by my clinical supervisor (e.g. designing behavioural change intervention for people who experience panic attacks; designing psychoeducational intervention for people with diabetes). Following the completion of each research task that I was given, I carried out a presentation in order to disseminate the psychological findings to interested parties (e.g. trust managers, psychologists, psychiatrists, nurses). I was able to highly develop my analytical, critical thinking and problem-solving skills and the ability to apply them to psychological settings. Moreover, I learnt to communicate insights from diverse sources of research data clearly and effectively to a diverse range of audiences using both text and visuals.

During my placement at WLMHT I had the opportunity to work with refugees and asylum seekers, mostly from Syria, Iraq and Afghanistan. Most of them had experienced unimaginable war trauma and their disclosures were very graphic and powerful. Working with people who have experienced such trauma was very challenging as I had to learn to control my emotions and safeguard myself from the potential impact of such disclosures. This was what motivated me to conduct my research on psychologists who face traumatic disclosures and explore how the exposure to such traumatic accounts affects them and influences the presence of VT. In addition I also aimed to examine the organisational factors that can contribute to the development of VT in psychologists in the NHS as during my training I witnessed a number of challenging incidents, such as physical and verbal abuse to staff by service users, service users self-harming or harming other service-users and other challenging situations. These incidents had a negative impact on staff as a number of staff quitted their job or asked to be transferred to different settings. Furthermore, I had noticed that the majority of the staff was experiencing job dissatisfaction and burnout symptoms, which could be indicators for the presence of VT.

Serious consideration was given to the ethical implications of interviewing individuals on the sensitive topic of exposure to client trauma. Debriefing was conducted before and after the interview to proactively identify and manage any emotional issues that might have emerged during the interview process. As part of the debriefing any potential levels of distress were informally risk assessed so that the groundwork could be laid for more robust assessment and management, if appropriate. Prior to each interview, I discussed with the participants what support was available to them in the event of distress arising out of the interview material. I also informed them that they could ask to stop and/or suspend the process at any time if they were feeling uncomfortable with it. At the end of each interview, we discussed how they felt as I wanted to address any negative effects they may have experienced. In case additional care was subsequently needed, the participants were advised of voluntary and statutory resources which they may wish to consider using if they felt a need for further support (e.g. staff counselling, occupational health, general practitioner helplines). In the case of more serious or urgent risk it was known that all the participants were psychologists working in the NHS. Risk assessment, risk management and suicide prevention training were provided by NHS mental health services and were mandatory on a yearly basis. All clinical staff, including trainees such as myself, were required to attend these training courses. Therefore, the psychologists in my sample were well-equipped to be able to work collaboratively and constructively with me to develop an effective risk management plan had the need arisen. The collaborative skills which we shared involve the detection of risk, the development of a safety plan, the creation of a trusted contacts list, identifying safety and self-soothing behaviours, and use of supportive social/family systems and places of safety. Additionally, they all had access to mental health services if needed (e.g. crisis assessment and treatment teams). None of the participants required any form of additional emotional support or risk management, therefore these skills were not used.

As I had worked with some of the participants, I had to be mindful and constantly aware of my role as researcher and not as a colleague. I was also conscious that knowing some of the participants in their working capacity could lead me to subconsciously use words in a way which could make participants share certain experiences and information. Previous knowledge of some of the participants could have an impact on the interpretation of collected data. In order to minimise the risk of contamination I was constantly reflecting on the above factors and making sure that existing biases or prejudices would not be expressed at any stage of the research (e.g. during interview, during data analysis).

For the purposes of the research, I decided to utilise a qualitative approach as my aim was to gain an in-depth understanding of psychologists' experiences and how they made sense out of them. On a practical aspect, when I started the search for participants for my research, I realised that it was more challenging than I expected it to be. In particular, advertising the research project asking for participants, contacting potential participants, trying to find an appropriate interview time that would work for both parties and dealing with cancellations were the main challenges I had to overcome. Through participants' recruitment and data gathering I learnt how to be flexible during the process and be more aware of time management as it was a vital part for the arrangements of the necessary interviews as some of the interviews had to be arranged two months prior.

Working in different settings with different populations helped me to increase my awareness of specific evidence-based psychological approaches and interventions, and familiarise myself with different mental and physical conditions and their implications. Another aspect of my work at WLMHT was that I had to be familiarised with pharmacological treatments, their effects and take into consideration how they might affect the course of psychological treatment and intervention. This was a huge challenge given the diversity of psychological and physical conditions encountered.

During my placement at WLMHT I sought opportunities to further develop my skills through continuous professional development. The *Learning and Development* centre of the trust was offering a wide range of workshops and I had the opportunity to attend a number of them (e.g. coaching for leaders, stress management, therapeutic engagement, safeguarding courses). Moreover, I was constantly seeking involvement in therapeutic groups in order to gain knowledge in designing and facilitating such groups (e.g. reflective practice group, reminiscence group). My clinical supervisor was very supportive and provided expertise and guidance when needed and made me feel confident in building my skills as a trainee health psychologist.

FURTHER OPPORTUNITIES

As a trainee health psychologist, I have volunteered to take part in various tasks in order to expand and develop my skills, such as teaching and training. During my placement, I had the opportunity to deliver a series of lectures to medical students of Imperial College London. The objective of the lecture was to inform the medical students about the different roles that a psychologist has in the NHS and also the available psychological models that are accessible to clients within the NHS. In addition, I designed and included in the lectures a role-play in order to familiarise the medical students with the CBT model. This was a monthly lecture and through this I had the great opportunity to develop my teaching and presentation skills. I was also able to prepare the lecture according to the students' feedback (e.g. students liked the role-play and would like to see more of it) and incorporate those changes in the following lectures.

Another chance I had to exercise my teaching skills was given to me by City, University of London. Firstly, I contacted the Director of the Health Psychology doctorate course and asked if it would be possible for me to deliver one of the lectures to Master of Science Health Psychology students of City, University of London. As a result, I participated in the delivery of a lecture themed '*Impact of Screening*' (cancer screening). Together with a doctoral colleague of mine we collaborated in order to design, develop and deliver this teaching. Our collaboration included conducting a literature review, deciding what the presentation slides would include, who was responsible for delivering which part, developing feedback forms and deciding the audio-visual material that we would use during the lecture. This collaboration made me realise the importance of teamwork and transparent communication with your team members. In addition, I learnt how to explore, review and develop a given topic into a master level lecture.

As a support worker at the *Westminster Society*, a charity organisation for people with learning disabilities and mental health issues, I had the opportunity to plan and facilitate a training workshop for the staff of the organisation. The Team Manager of the service asked me if I would be interested to facilitate a workshop for the staff about the practical issues in daily life that a person with learning disabilities and schizophrenia might face. I was enthused with the prospect of this opportunity and after careful preparation I managed to deliver the requested workshop to the service's staff. Part of my preparation involved consultation meetings with my clinical supervisor at the WLMHT as her expertise in this field was beneficial for the development of the workshop. I also carried out extensive research and a literature review to familiarise myself with the up to date data. Since I was already a support worker of the organisation and I knew a number of the issues that service users were facing, I decided to draw from my professional experience as well. In addition, my placement at the WLMHT provided me with further experience of treating people with schizophrenia which I found of utmost importance in designing the requested training workshop for the *Westminster Society*. As most of the staff was not familiar with complex psychological terminology, I had to design the workshop in a way that would be easily understood but without missing its objective. I believe that this was a big challenge for me both during the preparation period and the delivery of the workshop. I learnt how to pass knowledge and information to people who are not familiar with this scientific field. My main objective was to raise awareness amongst the staff and also to cause behavioural change by providing specific examples of how they could incorporate what they had learnt in the workshop to their practice. Since the workshop took place, I have been asked multiple times by other team managers to deliver a similar workshop to their services as well.

During my placement I had a number of opportunities to further develop my presentation and communication skills through a number of different presentations within the trust. My clinical supervisor provided me with the weekly task to present different topics (e.g. obesity and depression, diabetes and anxiety, partner's anxiety when carrying for someone with dementia) and their psychological approaches to healthcare staff including consultants, psychologists, ward managers and nurses. In addition, I had the opportunity to develop a film-making project to enable staff to explore the experience of psychosis and its impact on individual's behaviour. This involved facilitating staff to imagine and act the parts of people with perceptual, behavioural and cognitive distortions to experience how these play out in real life communications and to perceive how historical factors influence the alteration of behaviour and presentation of psychotic beliefs.

During my doctoral training I was unfortunately unable to attend any conferences as a result of my heavy work schedule. My placement post was a full-time honorary role and consequently I had to have a second job as a support worker in order to be able to meet financial needs.

FUTURE PLANS AND REFLECTION

Over the course of my training I gained experience of working within the NHS system and collaborating with other professionals in order to attend to the needs of clients. I came to realise that the NHS is a great theoretical model as a health system but it has become grossly underfunded, especially to its psychological services, and unfortunately that causes immense stress and anxiety to its healthcare staff and has an impact on their performance as well. This made me concerned about the future of the NHS and triggered my interest to be involved in the development of future psychological interventions, research and services that could potentially be both qualitative for the service users and cost-effective for the organisation itself. Health psychologists face difficulties working in the NHS but I am determined to try and change that by raising awareness of the importance of the work of a health psychologist for the NHS and how it can be cost-effective. Furthermore, through my training as a health psychologist I became aware of my interest in working directly with clients and organising educational workshops for both clients and staff. My interest at present lies within the field of nutrition and how we can apply behavioural change interventions to people who wish to change their diets. I also wish to be involved in academic research in regards to chronic illnesses and their association to nutrition as the role and importance of one's diet in developing physical conditions is prominent. What is overlooked in my opinion, mostly from an organisational scope, is that the focus is more on treating and managing the symptoms than the cause itself. For example, diabetes is a complex chronic condition that can not simply managed by a prescription-focused treatment. We need to alter and enrich our approach as health professionals and offer more support, guidance and psychoeducation in people with chronic conditions so they would be in a better position to take control of their condition in long-term. More interventions with focus on the psychological aspects of living with chronic conditions like diabetes are needed as the psychological well-being plays a great role in the management of such conditions. Interventions that would educate and inform people (and healthcare professionals as well) about the benefits of evidence-based and healthier dietary patterns (e.g. balanced plant-based diet) are much needed. The potential impact of those lifestyle interventions could subsequently lead to an improvement of individual's psychological well-being and quality of life. Also, we need to consider and plan such lifestyle interventions not as a one-off treatment plan but as a continuous and supportive plan, aiming to promote people's confidence and knowledge of their condition.

Over the past two years I have faced professional and personal challenges that I managed to overcome and have made me aware of future obstacles. For example, I learnt that miscommunication between staff could cause a great dysfunction to the provided services and the important issue is not "*who to blame*" but "*how we can attend to and fix this*". I also realised that in order to achieve your goals it is essential to accept responsibility, not avoid it, and that is why I welcomed responsibility every time I had the chance to do so. Moreover, as healthcare professionals we are in charge of our own professional and personal development, our working networks, and professional relationships and to make our own work known to other people. It is a competitive industry and we need to keep our professional development at a high level in order to be able to adjust when needed. To summarise, I consider that my placement has prepared me with the necessary tools in order for me to be able to carry out the profession of a health psychologist with the utmost respect and integrity.

Unit 2: Consultancy

Psychological interventions and input at *Rethink Mental Health*

REQUEST AND ASSESSMENT OF CONSULTANCY

Michie and Abraham (2004) suggest the following steps when assessing requests for consultancy: Who is the client? What is the objective? What is the background and context of the organisation? Why has the client contacted you? What is the timeline for achieving the objective? Does the client have a realistic idea of what you can achieve? What is the client’s bottom line? After establishing who the client was (please see Box 1), I enquired for further details regarding the new community service. *Recovery House* started its operation in January 2015 and it is operated by *Rethink Mental Illness*. The aim of this service is to help people recover from a mental health crisis whilst being close to their home. The service offers a therapeutic environment for people who are unable to stay at home due to their illness and would benefit from residential community-based care as an alternative to hospital admission.

BOX 1 Client's profile

Rethink Mental Illness is a UK based mental health charity. It was founded in 1972 by relatives of people who were diagnosed with schizophrenia. Initially, the charity's focus was helping people with schizophrenia whereas now *Rethink Mental Illness* no longer focuses on schizophrenia solely, but provides help to people with any type of mental disorder. This charity organisation provides services (e.g. community support, supported housing) both for the people suffering from the mental disorder and for their caregivers. There are also helplines for assistance and publications for further mental health information. *Rethink Mental Illness* goal is to raise awareness and understanding in regards to mental health, and minimise the stigma attached to people with mental health illnesses. The WLMHT where I worked as a trainee health psychologist had started a collaboration with *Rethink Mental Illness* charity organisation in January 2015.

The Manager of the ECAT team and the Team Manager of the *Recovery House*, were in charge for the collaboration between WLMHT and *Rethink Mental Illness* organisation. The Manager of ECAT approached me via e-mail (please see evidence folder for correspondence) and asked if I would be interested in working at the *Recovery House* and provide consultancy and psychological input. As I was given the opportunity to expand and broaden my skills by working as a consultant, I expressed my interest and arranged a joint meeting with the Manager of ECAT and the Team Manager of the *Recovery House*.

At the beginning of our meeting I asked the managers how they found my contact details and they explained that the Consultant Psychiatrist recommended me as he was satisfied with the quality of my work whilst working together at WLMHT. Both managers expressed their thoughts and expectations for the psychological consultancy. They wanted me to work with them in order to identify psychological intervention needs for their service users. They also requested assistance in identifying further issues within the service. I was informed that this would be a pilot service and therefore if the results were satisfactory then the *Recovery House* would seek the services of a permanent psychologist. As we established during our meeting, the aim of the consultancy would be *to identify psychological support needs for the service users in order to control and manage their mental and health conditions*.

The managers informed me that they would like the consultancy to run for three hours, one day per week for 14 weeks, starting on the 12th of January 2016 and ending on the 12th of April 2016; a total of 42 hours. They also clarified that they cannot offer any payment for this consultancy at this stage as there was a lack of funding. As I considered this to be an excellent opportunity to further improve and broaden my skills as a trainee health psychologist, I informed them that I was interested in working at the service, but I will need time to further assess and plan the psychological interventions that I could provide. For that purpose, I made a request to be provided with further information in regards to the service users and the service itself (e.g. the approximate length of their stay at the *Recovery House*; what their current conditions and needs are; any support they receive from the service; service referral system; staff profile). This allowed me to gain a deeper understanding in regards to service needs and where my main focus should be.

Recovery House serves as a transitional accommodation between hospital admission and discharge to the person's house. Usually in the *Recovery House* the service users would mainly recover from anxiety, depression and other mental health conditions (e.g. personality disorders), while at the same time suffer from a number of health conditions including diabetes, coronary heart disease, obesity, chronic obstructive pulmonary disease and others. In regards to their mental illness, they are not in an acute state but in a state of recovery whilst simultaneously trying to manage and control their health conditions.

Schein (1999) suggests exploring the requests of the client and considering whether the consultant would have been able to meet those requests. Following the discussions with the managers, I considered the consultancy to be feasible. The aim was well-addressed and specific to include: support the service users in order to manage and control both their mental and health conditions via psychological interventions which is something that I was able to provide based on my professional experience.

PLANNING THE CONSULTANCY

An important step for every consultant is to assess what they do and do not know. This process should be an active searching out of our ignorance (Schein, 1999). I consider self-awareness an essential and of utmost importance as a trainee health psychologist. That is why I always seek to gain a deeper understanding of my own limitations and weaknesses as a professional so I can grow and learn from them. This would be my first time working in a community-based service, meaning that new or different psychological interventions would potentially be required. For that reason, I requested the documents of the people staying at the time of consultancy at the *Recovery House* in order to read in detail their medical history and socio-cultural background. I also liaised with the staff of the *Recovery House* in order to gather more information about the profile of service users (e.g. their daily routine, their activities, and the current status of their mental and physical health). According to their background, the majority of the *Recovery House's* service users suffered from anxiety and depressive disorder, both in many cases alongside comorbid diabetes, obesity, coronary heart disease and other physical conditions. It is important to note that comorbid mental and physical conditions can lead to significantly poorer health outcomes and reduced well-being and quality of life (Naylor et al., 2012). After discussing my thoughts about service users' conditions with the Team Manager, I suggested that one-on-one psychological interventions could be beneficial for them, a suggestion that was supported by the manager. From my experience the interventions that have the potential to work well with the conditions mentioned above are: psychoeducation, mindfulness, relaxation techniques, and group therapy. I had used these interventions in a large number of cases during my work at WLMHT and I am familiar with their implementation and benefits. As a trainee health psychologist, it would be good practice to conduct a literature review in order to both refresh and update my knowledge regarding the aforementioned interventions and their effectiveness.

Mindfulness

Interest in mindfulness and incorporating it to therapeutic interventions within the NHS has been significantly increased in the last few years. According to Brown and Ryan (2003), mindfulness is the receptive attention to and awareness of present events and experience. Through mindfulness individuals could have more insight into reality and face their actions, thoughts, emotions and environment with increased clarity (Brown, Ryan, & Cresswell, 2007). Brown et al. (2007) point out that people could develop the ability to perceive thoughts as sensory phenomena (e.g. sounds, smells). Therefore, perceiving thoughts as objects of awareness and attention might allow people to use them more effectively. More specifically, Brown et al. (2007) underline that when mindful, an individual has the choice to separate their thoughts from their emotions and in that way, thoughts are less likely to be contaminated with prejudice, personal beliefs and other unsupported biases.

On their meta-analysis of 39 articles, Hofmann, Sawyer, Witt, and Oh (2010) concluded that mindfulness-based therapy had a positive effect in reducing symptoms of depression and anxiety. A meta-analysis of 29 studies on mindfulness-based interventions showed a large reduction in stress, an increase in the quality of life, and a decrease of anxiety and depressive symptoms (Khoury, Sharma, Rush, & Fournier, 2015). Recent studies support the effectiveness of mindfulness for preventing depression relapse and reducing depressive symptoms (Lilja, Zelleroth, Axberg, & Norlander, 2016; Shallcross et al., 2015). Mindfulness was also related with lower scales of anxiety, stress and depression, and higher scales of life satisfaction, self-esteem and optimism (Pawar, Panda, & Bobdey, 2016; Brown et al., 2007).

Relaxation training

Relaxation training is a cognitive and behavioural approach which emphasises the development of a relaxation response to counteract the stress reaction of anxiety (Manzoni, Pagnini, Castelnuovo, & Molinari, 2008). This response is defined by a set of integrated physiological mechanisms and adjustments that are elicited when a subject engages in a repetitive mental or physical activity and passively ignores the distracting thoughts when they occur (Esch, Fricchione, & Stefano, 2003). We find similar behaviours in forms of meditation (e.g. yoga) and they are associated with lower heart-rate, lower blood pressure and lower respiratory rate (Esch et al., 2003).

A ten years systematic review with meta-analysis indicates that relaxation training reduces the level of anxiety symptoms (Manzoni et al., 2008). Zhao et al. (2012) report that progressive muscle relaxation training is effective at improving anxiety, depression and overall quality of life of patients with endometriosis. Progressive muscle relaxation training also found to be effective on patients with pulmonary arterial hypertension, both for their anxiety and depression symptoms (Li et al., 2015). A study on effectiveness of relaxation on levels of pain and depression in patients diagnosed with fibromyalgia (Onieva-Zafra, Garcia, & del Valle, 2015) reports a significant reduction in pain and depressive symptoms of the patients.

Group therapy

Group therapy is a therapeutic intervention used by psychologists, and other trained healthcare professionals, and its goal is to tackle a specific problem such as depression, anxiety, substance misuse, obesity, diabetes and others. People can participate in group therapy in addition to their individual therapy. Active listening during the group session put the individuals’ own issues into perspective, while the group environment at the same time acts as a supportive network and a sounding board. Group therapy could be a valuable source of support for individuals as well as a source of information for the person’s mental or physical condition. For example, Kamkhagi et al. (2015) reported that group therapy had a significant impact in reducing symptoms of depression. An evaluation study of cognitive behavioural group therapy’s effectiveness on depression, suggested increased levels of self-esteem and a reduction of depressive symptoms (Chen, Lu, Chang, Chu, & Chou, 2006). Thimm and Antonsen (2014) found that the group that had cognitive behavioural therapy showed improved depression levels. Evidence supports the use of group therapy as an intervention for anxiety as well. A study carried out by Dugas et al. (2003) showed a decrease and significant improvement of the anxiety levels. Group therapy intervention was also beneficial for individuals suffering with social phobia (Merom et al., 2008). Furthermore, cognitive behavioural group therapy could be effective for individuals suffering from social anxiety with and without comorbid depression (LeMoult, Rowa, Antony, Chudzik, & McCabe, 2014).

Psychoeducation

Psychoeducation is an alternative approach which aims in targeting the development of overall knowledge about a physical or mental condition (e.g. depression, diabetes) for patients as a tool to support them in dealing with it (Tursi, Baes, Camacho, Tofoli, & Juruena, 2013). In addition, psychoeducation could improve the patient’s supportive network and reduce relapses (Tursi et al., 2013). By psychoeducating people healthcare professional raise the chances of patients being able to better manage, monitor and control their condition. Psychoeducation increases the awareness and understanding of one’s condition and can potentially help the patient to create an action crisis plan if needed. It could be implemented both to a group or one-on-one therapy setting. In her study regarding the effectiveness of psychoeducation in self-management of chronic pain Backstrand (2015) reports that there was a significant improvement in patients’ ability to effectively communicate information regarding their pain. In addition, they also reported an increase in their overall well-being and proactive attitude.

On their systematic review Tursi et al. (2013) suggest that psychoeducation is effective in improving the psychosocial functioning, clinical course, and treatment consistency of people suffering from depression. A meta-analytic review of 19 studies indicated the effectiveness of psychoeducation in stress reduction (Van Daele, Hermans, Van Audenhove, & Van den Bergh, 2012). The effects of psychoeducation on the mental health of patients with coronary heart disease has studied by Bashiri, Aghajani, and Alavi (2016). The results suggest that psychoeducation decreased the anxiety and depressive symptoms of patients and improved their cognitive and information-processing systems. A study of psychoeducation for the self-management of chronic cardiac pain (McGillion et al., 2008) showed an improvement in physical functioning and general health, as well as in angina pain symptoms. A number of further studies point out the effectiveness of psychoeducational intervention in patients with diabetes. Comorbid depression with diabetes levels were significantly reduced after the implementation of psychoeducational intervention (Yuniartika, Dwidiyanti, & Mu'in, 2016). In addition, Pibernik-Okanovic et al. (2015) found that diabetes related stress, self-management of diabetes, health-related quality of life and metabolic control were improved after a psychoeducational intervention. Another study showed improved levels of HbA1c (Katz, Volkening, Butler, Anderson, & Laffel, 2011).

The literature suggests that mindfulness, relaxation training, group therapy, and psychoeducation are evidence-based and effective interventions for the purposes of the consultancy. Following the literature review I drafted and sent a contract (please see Appendix 1) to the client with the aims, the timetable, and an estimation of the cost of the requested consultancy for future reference. The Team Manager agreed that the contract was suitable for the specific aims and objectives of the consultancy.

ESTABLISH, DEVELOP, AND MAINTAIN WORKING RELATIONSHIP WITH THE CLIENT

Any successful consultancy has its roots based in developing a helping relationship between the client and the consultant. This is the reason why I wanted to promote a collaborative approach through which the client would feel free to communicate any concerns during the course of the consultancy. This was achieved by meeting in person with the Team Manager of the *Recovery House* in the beginning of each consultancy in order to discuss any particular matters of concern (e.g. a service user shows signs of negligence about their health condition). I encouraged the rest of the *Recovery House's* staff to offer their input, thoughts, concerns and/or suggestions as it was also my aim to make them feel part of the process. After the end of each day a full handover was given to staff regarding the service users' progress. I considered this inclusive and collaborative approach to have been a success as the team manager's evaluation report suggests (please see Appendix 2).

CONDUCTING AND MONITORING THE CONSULTANCY

The consultancy took place at the *Recovery House* every Tuesday from 14:00 to 17:00, between 12th of January 2016 and 12th of April 2016; a total of 14 weeks. The main aim was to create an open and warm environment as a foundation for creating a trusting therapeutic relationship between me and the service users. I tried to achieve that by devoting time in getting a comprehensive knowledge and understanding of each individual from our first meeting. I requested to read their history folders and discussed with the staff their recovery progress and addressed any potential mental and/or health needs. Following that, I approached each service user, introduced myself and explained what the purpose of my work was and that they are welcome to come and see me during my working hours at the *Recovery House*. I considered the relationship with the staff to be of utmost importance for the best outcomes of the consultancy. The good level of communication between the staff and myself was evident through the way we handled the two issues that were raised during the consultancy (please see Box 2).

BOX 2 The two issues that were raised during the consultancy

Issue 1:

I considered it to be essential to be able to gain access to service users' notes prior to the consultancy in order to save time. After discussing this issue with the Team Manager, we came up with the following solution. The staff would send me an e-mail every Monday with the name and NHS number of individuals who have requested to have a session with me. This enabled me to gain access to the electronic notes in the hospital's database for each service user. I would have access to that information through my NHS account at WLMHT before Tuesday, which is when the consultancy would take place.

Issue 2:

Another issue that was raised during the second week of the consultancy was that I did not have a fixed number of service users every week. The reason for this was that service users were free to go out and come back as they pleased. In addition to that, some service users were discharged before our consultancy meetings on Tuesdays. Due to the aforementioned reasons, forming a group for a potential group therapy intervention was difficult. Providing group therapy sessions was one of the agreed objectives and therefore I arranged a meeting to discuss this with the Team Manager. We decided that it would be best to focus on the rest of our objectives.

A week after I begun working at the *Recovery House*, there was a change in management. The former Team Manager arranged a managerial meeting with the new Team Manager which I also attended. The new Team Manager was already part of the team when I started my work at the *Recovery House*, therefore we agreed to proceed according to previous plan and agreement.

During the following weeks, I provided one-on-one evidence-based interventions to service users who were struggling with PTSD, depression, anxiety, schizophrenia, often comorbid with diabetes, eating disorders, obesity, and chronic pain. I also provided psychoeducation sessions to the *Recovery House's* staff. The areas we focused on during our psychoeducational sessions were chosen by the staff according to service users' most prominent needs. These sessions were focused on nutrition and management for diabetes, how to act during a psychotic episode, schizophrenia, PTSD and intervention methods. In order to monitor the process of the consultancy, minutes were taken (please see Appendix 3) during my meetings with the Team Manager. Minutes proved to be a useful way of referencing when I wanted to check specific details regarding the needs and/or concerns of a service user. The handover by the staff working at the *Recovery House* proved to be extremely valuable and helpful for me in order to be up to date with service users' progression throughout the whole consultancy process. Furthermore, through weekly supervision and by keeping a supervision log I had the opportunity to address any issues of concern and be advised on how to better deliver my services.

EVALUATE THE IMPACT OF CONSULTANCY

An on-going verbal appraisal took place during the consultancy process regarding the quality and usefulness of the services I was providing at the *Recovery House*. This reassured me in regards to the efficiency of my work and encouraged me to continue to try and provide a high standard work ethic. At the end of the consultancy I conducted a two-step process to evaluate my work: a verbal and a written evaluation. The verbal evaluation was conducted by inquiring the staff about the effectiveness and usefulness of the consultancy. For the written evaluation, feedback forms (please see Appendix 4) were given to the staff to fill in. The results of both evaluations suggested that the consultancy was successful.

REFLECTION

When I was approached by the Manager of the ECAT we were discussing the possibility of me working at the *Recovery House*. I was excited as it would be an opportunity to work in a setting that I had never worked in the past. The good communication level with the client and the clear timeframe along with the aims were of utmost importance for the success of the consultancy. The Team Manager and the rest of the staff of the *Recovery House* put their trust in me and empowered me to utilise my experience and knowledge in an efficient way in order to achieve the agreed aims and objectives. It is important to note that after the first week of the consultancy the team manager changed. The change was smooth and after a brief meeting I had with the new team manager, the consultancy continued without amendments from the initial agreement.

Another aspect that made this consultancy successful was that I managed to establish a warm, respectful, non-judgemental and trusting environment for the service users through direct communication of their needs and concerns and through practising active listening. Service users were therefore more willing to challenge their mental and health conditions and were in a much better place to welcome behavioural change. When the two issues were raised that could affect the consultancy, I sought supervision for further advice. Due to the trusting relationship I had developed with the Team Manager I felt supported and confident to be able to overcome these issues.

Overall, I felt that the consultancy was conducted in a professional and efficient manner which was confirmed by the client as well. I was pleased with the progress of the service users and now the *Recovery House* will seek for a permanent psychologist in the future. The latter was another confirmation of the client’s satisfaction for the provided services. Being able to work without managerial changes throughout the entirety of one’s consultancy working contract is an important part of being able to deliver the agreed aims and objectives. It is therefore essential to establish from the start whether there will be any managerial changes as it could possibly affect the efficacy of the consultancy.

ANOTHER CONSULTANCY APPROACH

In retrospect, another approach could have been applied to design, deliver and evaluate this consultancy. Throughout the consultancy process, I ensured that I acted appropriately and professionally in order to establish and maintain a collaborative relationship with the client. As the aim was to assist the client to identify and resolve service issues, I could have operationalised the Process Consultation model (Schein, 1999), which suggests that the client and consultant work together to find solutions to identified issues and questions (Schein, 1999). I could have taken the role of the internal helper by assisting the client in the Recovery House services to make decisions about how the identified issues could be resolved. For example, working with the manager would have helped him identify the need for establishing clearer guidelines on who can refer and discharge service users, as such guidelines were absent. Additionally, we could have reached a joint solution faster to the issue of me receiving the service users’ notes ahead of time so that I could be prepared and updated before the sessions.

At this point in my career, I did not have the confidence to use either the Doctor–Patient or the Expert models (Schein, 1999). In the Doctor–Patient model, I would be the expert expected to identify problems and offer solutions, whereas in the Expert model, the client would have the diagnosing role and would need me to provide a specific service that, for reasons of resources or time, they would be unable to provide to themselves (Leong & Huang, 2008; Schein, 1999). My client management skills are still developing and, if I had used the Doctor–Patient model, the expectations could have been too high, which would have put a considerable amount of pressure on me. In addition, I would not have felt comfortable presenting myself as an expert as I was still in training. With the Expert model, I might have had fewer expectations to offer initiatives and suggestions; however, I would have had the additional pressure of delivering to an expert client. The Process Consultation model differs from the Doctor–Patient and Expert models in that both the consultant and the manager are involved in the identification of the problems, and both understand that neither possesses enough knowledge about the issues at the time of initial contact (Leong & Huang, 2008). However, it has been criticised for its lack of empirical evidence or clarity on mutual responsibilities during the consultancy process (Lalonde & Adler, 2013; Lambrechts, Grieten, Bouwen, & Corthouts, 2009). In addition, Lalonde and Adler (2013) suggest that the model does not always respond to the expectations of the client and that it can be difficult for consultants to adhere strictly to one role throughout the consultancy. Despite the criticisms, the Process Consultation model would have been the most appropriate model for this consultancy due to the collaborative nature of the project. In this case, neither myself or the client had a clear picture at the beginning of the needed interventions and therefore it was a journey of discovery for both of us.

I am aware that I still need to improve my consulting efficiency and develop my skills in regard to adapting to changes in circumstances, identifying needs, make clear plans and taking the lead during meetings – an area that I do not feel particularly confident in at this time.

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Appendix 1

Consultancy Contract

Aims

- To address the psychological aspects of physical health
- To provide health education
- To provide relapse prevention skills

Objectives

- To provide one-on-one psychological sessions
- To provide group therapy sessions
- To provide mindfulness techniques
- To provide relaxation techniques
- To provide psychoeducation

Rationale

The client has requested the services of the Trainee Health Psychologist and has agreed to the above aims and objectives.

Timetable

The consultancy will run for three hours, one day per week for 14 weeks, starting on the 12th of January 2016 and ending on the 12th of April 2016; a total of 42 hours.

Budget

Due to lack of funds the consultancy will be provided for free. Below is an estimation of the budget that would be needed.

Trainee health psychologist’s salary per year in the NHS is approximately £26,565 (NHS Education for Scotland, 2016) which is about £73 per day/£10.5 per hour.

Based on the above timetable:

14 weeks x 3 hours = 42 hours

42 hours x £10.5 = £441

Materials and other equipment:

Computer access, printing, photocopying, folders, coffee, tea and snacks to be provided by the client.

Total estimation of the cost for the requested consultancy is £441.

Appendix 2

Workplace Evaluation Report

Section 1 - To be completed by the trainee:

Trainee's name	Anastasios Toumpanakis
Name of workplace contact	Rethink Mental Illness, Recovery House
Nature of work and competence assessed	Nature of work: Health Psychology Consultant Competence assessed: Consultancy

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Section 2 - To be given to the workplace supervisor to return directly to above address: Views on the Trainee's Performance on above piece of work (write comments below or email a separate report). Please also comment on any reason for delays in the completion of this piece of work and report any periods of prolonged absence.

Anastasios Toumpanakis attended the *Rethink Mental Illness Recovery House* service in Ealing on a weekly basis from 12th January until 12th April 2016 for the purpose of providing psychological consultancy.

Anastasios provided a range of psychological interventions, including:

- Mindfulness, relaxation and attention focus techniques according to individual needs
- Cognitive and behavioural interventions for depression/anxiety, and physical conditions (e.g. diabetes, obesity)
- Psychoeducation to both patients and staff. Topics varied according to patients' needs. For example, the benefits of a healthy diet, self-management for maintaining

a healthy weight, controlling diabetes, anger management, PTSD, managing chronic pain and others.

Anastasios's contribution at the service proved invaluable, with tangible good outcomes for the majority of patients. One particularly notable example was an individual at the service who had been diagnosed with schizophrenia over 20 years ago and been treated as such since. Anastasios felt after his initial sessions with him that his may have been an inappropriate diagnosis, with elements of PTSD prevailing in the presentation. He sought guidance in supervision and played a key role in the revision of the individual's care planning, resulting in a marked improvement and giving the person a renewed sense of hope and the motivation to pro-actively pursue his own recovery journey. This individual has since returned to the community and is thriving, living a more fulfilled life far less reliant on services. I have also noted several examples of patients employing effective coping strategies to deal with symptoms of agoraphobia, sleeping disorders, panic attacks and psychosis as a result of Anastasios's coaching approach. Moreover, his interventions helped patients to better understand, control and monitor their physical conditions such as obesity, diabetes, chronic pain and others. There was also clear progression with several patients regarding nutrition, attention to own healthcare needs, nutrition and daily living tasks.

I have found him to be punctual, communicative, approachable and affable. He works in an inclusive person-centred way, tailoring treatment plans specifically for each individual, listening with a genuine sense of enquiry, encouraging independence and patient input into their own care. The popularity of his sessions at the service led to the need for a bespoke diary system to cope with demand.

His approach is thorough professional. He would read through all service user files before every session, requesting that progress notes be forwarded to him in advance and was always meticulously prepared. There was lucid interfacing and feedback between multi-disciplinary teams and other professionals. His handovers to service staff were structured, clear and accessible, ensuring they could maintain consistency and continuity of care within a joint working framework. He also coached staff and provided psychoeducation on a number of subjects, broadening the collective skill base and knowledge within the team. I would add that alongside sharing therapeutic practices he imparted a range of de-escalation techniques and ways to manage abreaction and chaotic/histrionic behaviour that have proved invaluable in containing incidents and enhancing the safety of service users and staff.

Anastasios's placement at the service was essentially a pilot which proved extremely successful. As a result, I will request psychological consultancy in this format on a permanent basis.

Declaration

I verify that the above-named trainee has undertaken the above-mentioned piece of work. I am of the opinion that it has been completed to a satisfactory professional standard.

Signature: [redacted] Date: 02/05/2016

Appendix 3

Meeting Minutes

Minutes of consultancy meeting

Date: 12/01/2016

Present: Trainee Health Psychologist and Team Manager

Minutes:

- The Team Manager introduced the Trainee Health Psychologist to the staff and service users.
- The Team Manager showed the Trainee Health Psychologist where the service users' folders and progress notes are kept.
- The Team Manager gave a detailed account of the service users currently at the service.
- The Team Manager showed the Trainee Health Psychologist the fire exits and assembly point.
- The Trainee Health Psychologist expressed his intention to introduce himself to the service users and explain his role.
- The Team Manager and the Trainee Health Psychologist agreed that weekly meetings will provide a level of continuity and establish a relationship in which both parties can raise thoughts and concerns.

Minutes of consultancy meeting

Date: 19/01/2016

Present: Trainee Health Psychologist, New Team Manager and Former Team Manager

Minutes:

- The Trainee Health Psychologist was informed that the management of the service has changed. Both the former and new Team Manager discussed with the trainee Health Psychologist that the already agreed aims of the consultancy will remain the same.
- The Team Manager and the Trainee Health Psychologist discussed service users' progress as well as newly admitted service users.

- The Trainee Health Psychologist suggested that service users' details are forwarded to him by the staff at least a day prior to the consultancy. This will enable the Trainee Health Psychologist to have a read through the service users' history in order to save time and be able to be prepared for the consultancy.
- The Trainee Health Psychologist discussed with the Team Manager that the group therapy intervention could not be provided because there was not a fixed number of service users at the *Recovery House* was not fixed.

Minutes of consultancy meeting

Date: 26/01/2016

Present: Trainee Health Psychologist and Team Manager

Minutes:

- The Team Manager and the Trainee Health Psychologist discussed service users' progress as well as newly admitted service users.
- The Trainee Health Psychologist raised his thoughts in regards to a service user's diagnosis. He is diagnosed with paranoid schizophrenia but through the one-on-one sessions strong elements that suggest PTSD were identified. The Team Manager agreed to pass these thoughts to the team and monitor the service user more closely.

Minutes of consultancy meeting

Date: 02/02/2016

Present: Trainee Health Psychologist and Team Manager

Minutes:

- The Team Manager and the Trainee Health Psychologist discussed service users' progress as well as newly admitted service users.

Minutes of consultancy meeting

Date: 29/03/2016

Present: Trainee Health Psychologist and Team Manager

Minutes:

- The Team Manager and the Trainee Health Psychologist discussed service users' progress as well as newly admitted service users.

- The Trainee Health Psychologist suggested that he considers it to be beneficial for the service users' progress to let them know two weeks in advance of the final date of their psychological sessions.

Minutes of consultancy meeting

Date: 05/04/2016

Present: Trainee Health Psychologist and Team Manager

Minutes:

- The Team Manager and the Trainee Health Psychologist discussed the progress of the service users and new admissions.
- The Trainee Health Psychologist discussed the fact that next week will be his last working day at the service. The Team Manager expressed his satisfaction for the provided services and his interest in seeking permanent psychology services in the future.

Minutes of consultancy meeting

Date: 12/04/2016

Present: Trainee health psychologist, team manager and members of staff

Minutes:

- The Trainee Health Psychologist gave a full handover about the service users who were under his care.
- The effectiveness of the consultancy was discussed. The Team Manager and the staff gave positive verbal feedback.

Appendix 4

Feedback Form

Subject: Psychological consultancy
Date: Thursday 6th October 2016
Location: Recovery House

Consultancy Feedback

a) The service users have benefited from the psychological services provided

Do not agree				Totally agree
1	2	3	4	5
-	-	-	11%	89%

b) Psychological consultancy helped you as a professional

Do not agree				Totally agree
1	2	3	4	5
-	-	-	44%	56%

c) Please rate the psychological knowledge of the Trainee Health Psychologist?

Low				High
1	2	3	4	5
-	-	-	11%	89%

d) Please rate the communication skills of the Trainee Health Psychologist?

Low				High
1	2	3	4	5
-	-	-	-	100%

e) Was the Trainee Health Psychologist able to answer your questions?

Low				High
1	2	3	4	5
-	-	-	22%	78%

f) The objectives of the psychological consultancy have been achieved

Do not agree				Totally agree
1	2	3	4	5
-	-	-	11%	89%

g) I believe that permanent psychological input in the future would be beneficial for our service

Do not agree				Totally agree
1	2	3	4	5
-	-	-	-	100%

h) Overall the psychological consultancy was successful

Do not agree				Totally agree
1	2	3	4	5
-	-	-	11%	89%

i) Other comments and suggestions:

Overall, the staff included responses such as: *the Trainee Health Psychologist was a consummate professional, thorough, precise, warm and generous*; *the service users reported finding their sessions with the Trainee Health Psychologist tremendously helpful*; *the Trainee Health Psychologist's handover was detailed and careful*; *the Trainee Health Psychologist's input has been missed since the end of his time here*; *the Trainee Health Psychologist proved to be an invaluable contributor to the service*; *the Trainee Health Psychologist was an excellent communicator and totally professional*; *outcomes were consistently good and the Trainee Health Psychologist's contribution to staff development was notable alongside his tangible results with service users*; *the service was of value*.

Unit 3: Behaviour change intervention

Cognitive Behavioural Therapy intervention for depression in adults with Type 2 diabetes at West London Mental Health National Health Service Trust

INTRODUCTION

Depression is a mood disorder which can seriously affect one's mood and its symptoms can cause prolonged sadness, hopelessness and loss of interest for things you used to like (NHS, 2016a). Daily activities like sleeping, eating, and working are also directly affected by depression (National Institute of Mental Health, 2016). According to the NHS (2016a) someone affected by depression might experience psychological symptoms (e.g. low self-esteem, suicidal ideation, feelings of helplessness, anxiety), physical symptoms (e.g. slow speech, lack of energy, decreased sex drive, disturbed sleep), and social symptoms (e.g. avoiding social interaction, difficulties in family life, neglecting interests). The aforementioned symptoms might co-exist but it is unlikely for a person to have all of them together. The WHO (2017) states that depression is the leading cause of disability worldwide and is a major contributor to the overall global burden of disease. The number of people globally affected by depression is more than 300 million, whilst women are affected more than men (WHO, 2017). In the UK 19 per cent of adults reported that they have been diagnosed with depression at least once (Mental Health Network, 2016). In 2013/14 almost 3 million adults were registered for depression on GP surgeries (Mental Health Network, 2016). In addition, in 2009, the NICE (2009) stated that depression is two to three times more common in people with a chronic physical condition than in people who are in good physical condition and occurs in 20 per cent of people with a chronic physical condition. The pain, functional impairment and disability in people with chronic illnesses can increase the risk of developing depression. Depression can also aggravate the physical pain and psychological distress associated with physical conditions whilst negatively affecting outcomes, including shortening life expectancy (NICE, 2009).

T2D is a chronic condition that causes high blood glucose levels due to the insulin resistance and insufficient insulin production (Wroe, Rennie, Sollesse, Chapman & Hassy, 2018). According to Diabetes UK (2019) the number of people with T2D is on the rise and increasing and suggests that 4.2 million people in the UK have been diagnosed with T2D. T2D can increase the risk of a number of health complications (if not well managed) such as nephropathy, diabetic retinopathy, lower extremity amputation, cardiovascular disease, cerebrovascular damage and peripheral nerve damage (Tidy, 2017; WHO, 2016; International Diabetes Federation, 2015). People with T2D face one of the most psychologically demanding chronic conditions and as it is often comorbid with depression its management and control are affected (Habtewold, Islam, Radie & Tegegne, 2016; WHO, 2016). T2D's comorbidity with depression has been linked to poorer management of the condition (Lloyd, Pambianco & Orchard, 2010; Fisher et al., 2008; Lin et al., 2004), while the psychological stress associated with the management of T2D could worsen individual's depression (Golden et al., 2008).

Part of my work as a trainee health psychologist at the WLMHT is to formulate and implement interventions for the psychological treatment and/or management of service user's mental health and/or physical condition. I have worked with a substantial amount of service users who have been affected by depression comorbid with chronic physical conditions (e.g. diabetes, chronic heart disease, rheumatoid arthritis, obesity). Most of the people I have worked with had depression comorbid with diabetes. Therefore, the aim of this competency is to apply a psychological theoretical framework and conduct a behaviour change intervention in a specific target population. This being people affected by depression comorbid with diabetes. As a result of their depression, service users were neglecting their diabetes management. Thus, the initial need was to work with the service users' symptoms of depression in order to aim at and alleviate the depression itself. After reaching a satisfactory point where the depressive symptoms had been alleviated, the service users were able to acknowledge the neglect of their diabetes management and were willing to work in order to improve it. Therefore, in the first stages I specifically targeted service users' symptoms of depression and when these were improved, I worked with service users to improve their T2D self-management. I used the CBT model to tackle symptoms of depression and T2D poor management (e.g. infrequent or absent blood glucose monitoring, poor dietary pattern).

THEORETICAL FRAMEWORK

Michie and Abraham (2004) suggest four key points of health promotion: the need for planning; the importance of evaluation; the use of social and behavioural theories; and the systematic application of evidence and theories in the development of health promotion programmes. As a trainee health psychologist, I have learnt that planning, use of theory and evaluation are skills of utmost importance to be able to successfully apply an intervention that aims to alter unhealthy behaviours (e.g. lack of physical activity, poor eating habits, illicit drug use, uncontrolled alcohol abuse, smoking).

There are a number of theoretical models and behaviour change techniques that can be used to in order to invite behavioural change. NICE (2009) suggests CBT as a way of treatment of depression in adults with a chronic condition like T2D. CBT is a talking therapy which involves a combination of cognitive and behavioural approaches. It can help people to change the way they think and the way they act (Royal College of Psychiatrists, 2013). Behavioural therapy approach has its roots from the 1950s and 1960s when professionals like Eysenck, Skinner, Bandura, and Rotter started to use behavioural research to the treatment of individuals, while at the same time they were developing their own research on behaviourism. Behavioural approach for example involves the performance of behavioural experiments within a psychological intervention or as a part of individual’s homework (Michie & Abraham, 2004). Through the behavioural experiments the therapist can directly test the negative beliefs that individuals may have; success in these tasks brings longer-term cognitive, behavioural and emotional changes. The cognitive model for depression (Figure 1) was pioneered by Aaron Beck back in the 1960s.

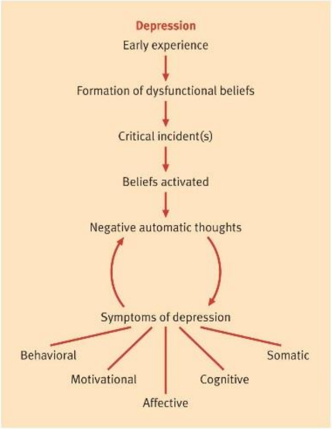

Figure 1: The cognitive model of depression

The model suggests that specific experiences drive people to form assumptions about themselves and the world, and therefore these assumptions guide the person’s behaviour and actions. A number of these assumptions though could be dysfunctional and unhelpful. When a critical event that challenges the person's beliefs occurs it is easier for depression to be developed. When activated, the dysfunctional assumptions produce the negative automatic thoughts which act as predictions about the future, interpretation of the present, or as a reminder of past experiences (Hawton, Salkovskis, Kirk & Clark, 1989). This could lead to a number of depressive symptoms like loss of sleep/appetite, withdrawal, poor concentration, loss of interest, guilt, and poor self-hygiene (Hawton et al., 1989). During the 1980s and 1990s cognitive and behavioural approaches merged into CBT. The aim of CBT is to support individuals to change the aforementioned negative patterns in order to alleviate the depressive symptoms and eventually overcome depression itself. Moreover, CBT aims to tackle current issues rather than focussing on issues from the past (NHS, 2016b). Our thoughts, emotions, physical reactions and behaviours are interconnected, and negative thoughts and feelings can entrap us in a vicious repetitive cycle. CBT is time limited and usually occurs between six and twenty sessions. It is structured and directive and is a process of guided discovery, rather than lecturing. It is also educational by providing individuals with cognitive and behavioural techniques and skills that can be used in other situations if need be; it is based on a collaborative relationship between the therapist and the individual; it is based on inductive methods, so the individual can learn to view beliefs and thoughts as hypotheses whose validity is open to test (Royal College of Psychiatrists, 2013; Hawton et al., 1989). The CBT model was utilised in order to develop and implement the behavioural change intervention at WLMHT's service users who were experiencing depression with comorbid T2D.

PLANNING AND ASSESSING THE SUITABILITY OF SERVICE USERS FOR BEHAVIOUR CHANGE INTERVENTION

Michie and Abraham (2004) state that as healthcare professionals we have to take into consideration two things in regards to the impact of behaviour on health and well-being: (a) certain behavioural patterns can cause a significant proportion of the mortality from the leading causes of death, and (b) such patterns are modifiable and can be changed in favour of individual's health. As depression comorbid with diabetes could significantly worsen the individual's health and self-care, and economic burden of diabetes (Atlantis, Fahey & Foster, 2014) treating depression can subsequently have a positive effect on the severity of the symptoms experienced due to diabetes.

I conducted an assessment in order to determine whether an individual (suffering from depression comorbid with T2D) is suitable for psychological intervention once they have been referred to the Psychology department. The assessment involves:

a) Reading the service users' medical record in order to be familiar with their history.
b) Identifying the nature and severity of their depression.
c) Determining if the service user is willing to accept the treatment rationale and engage in the psychological intervention.
d) Identifying whether the individual has any existing coping skills and how extensive they are.
e) Getting an account of the events that lead to their admission from the perspective of the service user as it is crucial to understand how the person experienced these events both on an emotional and cognitive level.
f) Liaising with ward staff in order to identify individual's day-to-day activities and behaviour in the ward.

From my experience as a trainee health psychologist I have learnt that each individual has different needs even if they have similar conditions. This is why I believe that a thorough assessment is necessary in order to determine the suitability of individuals for behaviour change psychological intervention. Most importantly, the individual needs to be willing to at least try and change their dysfunctional thought pattern and break the vicious cycle. After determining that the service user is suitable and willing to participate, the psychological intervention can begin.

STRUCTURE AND CONDUCTION OF THE BEHAVIOUR CHANGE INTERVENTION

CBT is the suggested intervention by NICE (2009) for depression in adults with a chronic physical health condition such as T2D, and WLMHT follows this guideline. CBT interventions usually consist of six to twenty sessions depending on the needs and history of the individual. The number of sessions in this intervention for people with depression comorbid with T2D, was between ten and fourteen. As outlined above, after the initial assessment for suitability the first psychological session takes place. Please see Box 1 for an overview of the structure of the first session.

BOX 1 First session's structure

A. **Discussing the treatment rationale and addressing questions:**
   Explaining the CBT structure and what CBT can offer
   Explaining that depression that affects self-care can be understood and changed
   Outcomes of similar cases can be discussed
B. **Formulation:**
   Assessing current experienced difficulties, including difficulties in managing T2D
   Assessing the presence of suicidal ideation or hopelessness
   Underlining the main problems
   Support mechanisms
   Life context
C. **Defining the goal of the intervention:**
   Setting a clear and realistic goal
D. **Setting an aim for the next session:**
   Agreeing to the type of homework

The aims of the cognitive behavioural therapy (CBT) interventions were (1) to improve and alleviate service users' symptoms of depression and (2) to work towards better self-management of their type 2 diabetes (T2D) (e.g. regular blood glucose monitoring) after the depression symptoms had improved. What follows is a general account of how CBT interventions were approached and the core themes that emerged during the sessions.

The initial session was highly important for me to establish a collaborative relationship and develop a rapport with service users. First, I explained the CBT process and structure and provided service users with practical information, such as how long the sessions would last, how many sessions would take place and the importance of them taking an active part in the intervention by completing homework tasks outside of the session. My main aim was to explain in a clear manner how the CBT model works and to communicate that change is possible. I explained that by learning to identify the depressive symptoms and dysfunctional thinking patterns that affect their T2D management, as well as the negative automatic thoughts that maintain the vicious cycle, they could break the cycle of negative thinking. Next, I assessed the current difficulties experienced by the individuals and how depression was affecting their condition. This was the formulation stage of the session (please see Appendix 1), in which we discussed their social support network and living circumstances and collaboratively underlined the main issues they faced. We tried to identify their negative automatic thoughts and connect these to current events and areas of dysfunction, as my experience suggests that collaboratively making a list of the issues that need to be addressed promotes a good rapport. CBT formulations helped us create a visual map of the factors contributing to poor diabetes management, which were likely to be important for the improvement of their depression. In particular, the main reported issue that required further attention in later sessions was feelings of depression and shame resulting from poor self-care and self-management of T2D. Ensuring that any suicidal ideations and feelings of despair or hopelessness were addressed in the first session was of utmost importance as the standardised mortality ratio for suicide seems to be higher for people with diabetes (Sarkar & Balhara, 2014). If suicidal ideation had been identified, further assessment would have been needed to determine its severity. However, in the current case study report, none of the individuals expressed any form of suicidal ideation.

The next step was to define the goal of the intervention. Based on my experience to date, I would suggest that a step-by-step goal process is more helpful than setting long-term goals as it seems more achievable and encourages action and change. Discussing these goals gave me the opportunity to identify any unrealistic expectations the service users may have had from the psychological intervention and to clarify what the intervention could realistically provide. The main goals identified were to address the depressive symptoms preventing service users from managing their T2D and to improve the poor management of their diabetes once they felt ready. Feedback from service users was important to confirm that everything had been thoroughly explained and understood as it can be challenging to process all the information provided in the initial session. Finally, we collaboratively set a specific goal and agreed on the homework tasks for the next meeting; this involved keeping a mood and thought diary (which would allow us to explore their thoughts and the progress of their moods between sessions) and implementing breathing exercises and mindfulness techniques. A common pattern identified in these early sessions was behavioural inactivity; thus, my aim at this stage was to engage service users with homework.

Subsequent sessions generally followed a consistent structure (please see Box 2), with minor changes based on individuals' progress and needs. Each session began with a mood check; I asked service users to tell me how they were feeling that day compared with our previous session. I then asked about any negative or positive experiences they had had since the last session. At this early stage, most participants reported feeling low, without energy and worried that they would not be able to feel good again. However, they also reported positive feelings, specifically connected with visits from family and friends. We discussed their positive emotions to help them acknowledge that they were capable of experiencing positive feelings. Following the mood review, I created a bridge between the previous session and the current one by reviewing the events that occurred since our last session and how the service users dealt with them, and by asking for feedback on the previous therapy session. We then set the session agenda, selecting a specific topic that the service user wanted to focus on. Most of the time, this was negative thinking and ways to manage it. Before moving on to the main topic, we reviewed the previous session's assigned task. We read the mood and thought diary, if available, and underlined any important events, thoughts and emotions that service users had experienced (please see Appendix 2). Some participants considered these diaries hard work and did not always complete them. My experience of working with depression suggests that writing tasks can be challenging as they involve active engagement and effort. In these cases, we explored any difficulties that they might have had in carrying out their assignment and I explained to them the potential positive outcomes of being able to monitor their feelings (e.g. awareness of their mood patterns would help them manage their depressive symptoms). Most of the individuals began keeping diaries by the second or third session once they acknowledged that seeing their mood progression on paper was helpful to them. Service users reported that, through their diary and the session mood reviews, they were able to recognise specific patterns and times in the day when their depression symptoms were more difficult to manage. The emphasis of this part of the session was on promoting self-help and independent functioning, and I highlighted the importance of service users completing the agreed tasks to increase the chances of overcoming their depression and moving on to the next goal, which was the better management of their diabetes.

BOX 2 Following sessions' structure

A. **Setting the agenda:**
   - Review of any events since last session
   - Ask for both positive and negative experiences since last session
   - Set a specific subject for this session

B. **Feedback on previous session:**
   - What was important during last session

C. **Task/homework review:**
   - Review of any difficulties encountered
   - Review of the outcome
   - What the individual has learnt through this?

D. **Main topic of the session:**
   - Discuss and review the specific subject
   - Discuss possible psychological strategies for the individual

E. **Agreeing and setting new task/homework:**
   - Set an action plan until the next session

F. **Feedback:**
   - Has the session met individual's expectations?
   - Did the individual feel uncomfortable during the session?
   - Is there anything the individual would like to see changed in the future sessions?

Following the diary review, we discussed the agreed session topic, which could be different each week. If more than one topic was suggested, we tried to prioritise them; however, in the majority of cases, service users were concerned about their negative thinking. By implementing specific CBT formulations such as the vicious circle or vicious flower diagrams, I aimed to identify the cognitive processes that maintained service users' negative thinking. Research suggests that therapists need to be aware that the use of diagrams can trigger negative reactions to case conceptualisation in some cases (Moorey, 2009; Chadwick, Williams & Mackenzie, 2003). However, in this case, most of the participants found the diagrams useful for conceptualising the presenting issue and examining their negative experiences in a simple visual form. By placing their thoughts in the form of CBT diagrams, I aimed to increase awareness of negative feelings and elicit hope for change. In addition, this approach accustomed the service users to the cognitive model by demonstrating links between their thoughts, feelings, behaviours and physical sensations. This helped me identify and focus on the factors likely to be important in improving their depression. In particular, I was able to identify the main issues that were maintaining depressive symptoms and behavioural inactivity in regards to T2D management: poor diet and not monitoring for glucose levels.

Depression and poor diabetes management were interrelated in these cases; the service users felt depressed because they were not properly monitoring and managing their diabetes, which resulted in inactivity and further poor management, maintaining the vicious cycle. Therefore, I deemed it useful to provide information regarding the depression-diabetes relationship. For example, I informed them that lifestyle factors, such as poor diet and lack of exercise, can contribute to the comorbidity of depression and diabetes (Badescu et al., 2016; Holt, de Groot & Hill-Golden, 2014; Sartorius, 2018). Research also suggests that there may be a mutually reinforcing phenomenon that poorer adherence to self-management might increase blood glucose, which in turn contributes to depressive symptoms and decreased adherence to self-management behaviours (Holt et al., 2014; Gonzalez et al., 2007). We also discussed that people with depression are more likely to eat unhealthy diets rich in refined sugars and saturated fats while avoiding vegetables and fruits (Holt et al., 2014), which could lead to poor diabetes management and an increased risk of the condition worsening. I also wanted service users to appreciate that non-adherence to self-care management in those with T2D and depressive symptoms is not unusual or shameful but rather a normal behaviour that they could overcome. With this information, most of the service users were able to acknowledge the relationship between depressive symptoms and diabetes management by their third or fourth session.

Next, we started to work on cognitive and/or behavioural techniques to improve the symptoms of depression. Table 1 shows the techniques used to educate the service users and equip them with the necessary tools to better understand, manage and control their feelings, physical reactions and thoughts. For example, most of the service users were following a poor sleeping pattern, leading to daytime exhaustion. I explained the importance of keeping a healthy sleep hygiene, as research shows that impaired sleep affects about 75% of people with depression and is likely to maintain or worsen depressive symptoms (Steiger & Pawlowski, 2019; Nut, Wilson, & Paterson, 2008; Armitage, 2007). Most of the service users found using sleep hygiene techniques and muscle relaxation exercises before going to sleep helpful for reducing stress. Consistent with research, the improvement of sleep hygiene was the most common identified factor that signalled the improvement of depressive symptoms in service users (Freeman et al., 2017; Scott, Webb & Rowse, 2017). Most of the individuals were able to acknowledge the improvement of their depression by the fifth to seventh sessions. This was established by reviewing their homework and through exploratory discussions within sessions.

When the goal of alleviating the symptoms of depression had reached a satisfactory level, we started to work towards the improvement of their T2D management.

Table 1: Psychological techniques used during intervention

Psychological technique	How it applies to the intervention
Psychoeducation	Providing information and education in regards to individual's condition.
Behavioural experiments	Aim to tackle individual's negative thoughts, predictions and beliefs.
Thought record diary	Helps to document negative thoughts and emotions, to analyse the individual's thinking and re-evaluate their thoughts.
Progressive muscle relaxation	The individual learns to relax their muscles resulting in minimising tension.
Mindfulness	The individual can direct their attention in a non-judgemental way to what is happening in the present moment in their mind, body and environment.
Sleep hygiene	Providing information in order to improve the quality of night-time sleep.

My objective was to facilitate the knowledge, skills and abilities necessary for diabetes self-care through education, support and positive reinforcement. Service users identified regular blood glucose monitoring as their main concern regarding their T2D self-care, followed by unhealthy diet. The following sessions focused primarily on education about these identified areas. During psychoeducation, service users were given information consistent with research evidence in the field of diabetes on the importance of adherence to self-monitoring of blood glucose and diet (Markowitz et al., 2012) and on the close relationship between glycaemic control and reduced risk of health complications. By regularly monitoring their blood glucose, service users shifted their focus from bad or good glucose results to new patterns and information (e.g. 'This increased blood glucose might be due to the combination of food I had; therefore, I need to reconsider combining these types of food in the future.'). Further psychoeducation was also provided on nutrition, for example, the role of fats and refined sugars in diabetes, how to properly read food labels and daily meal plans. As service users started to show a level of adherence to self-management of their T2D, they also began feeling that they were in control of, and actively involved in, their condition. Although the symptoms of depression had improved by the time service users showed some adherence to the management of their T2D, we continued to assess and review any symptoms, negative thoughts or emotions that emerged. However, by the eighth and ninth sessions, the symptoms of depression in most of the service users were manageable and significantly decreased.

At the end of each session, we agreed on the homework task for the next meeting, which needed to be relevant with the content of the current session. From working with different individuals, I have come to find that writing down exactly what the task entails helps to avoid any misunderstandings. As previously mentioned, there were times, especially in the early stages, when service users expressed an unwillingness to commit to completing the homework. My approach in that situation was to discuss with them what their reasons were and to explain how important it was for the overall progress of the intervention that they complete the agreed homework. Finally, I asked for feedback on the session – I asked them to describe their feelings and whether they had felt upset or uncomfortable at any point during the session. As a trainee health psychologist, I tried to promote honesty and make it clear to the individuals that they should feel free to give honest feedback, whether positive or negative. Feedback is important as it helps the professional address the individual's concerns and adjust their actions and approaches to meet the individual's needs (Weck, Kaufmann, & Hofling, 2016).

EVALUATE THE IMPACT OF PSYCHOLOGICAL INTERVENTION

Verbal feedback was provided at the end of the intervention by the individuals which suggested that the psychological intervention met their aims and goals. The feedback that was provided during and at the end of each intervention by the multi-disciplinary team (e.g. doctors, nurses and care coordinators) suggested that the psychological intervention had a positive impact on service users' lives. It helped them to address the symptoms of depression, and therefore be able to focus on and better manage their diabetes.

REFLECTION

I am grateful for the support that I received from my WLMHT supervisor throughout the time that I was carrying out the psychological intervention. Whenever I was facing an obstacle, I was able to collaboratively assess the situation and formulate an action plan. I found the implementation of the psychological intervention on people suffering from depression comorbid with T2D very challenging at the beginning yet extremely rewarding at the end. It was challenging because most of the individuals at the beginning were not very willing to engage in the tasks/assignments. The way I managed this was to create a warm, safe and non-judgemental therapeutic environment which promoted rapport. I therefore managed to help keep individuals engaged and encouraged them to carry out what was essentially their part of therapy. I particularly enjoyed delivering the psychoeducation parts of sessions during which I was informing the service users about the importance of the intervention in order to tackle their depression and thereafter manage their chronic condition. Service users were not able to manage their chronic condition very soon after they had been affected by depression. Therefore, the participants seemed to particularly enjoy relaxation, mindfulness and breathing techniques. I also found the collaboration with the rest of the healthcare professionals such as doctors and nurses as vital for the successful completion of this intervention.

ANOTHER APPROACH

In this behavioural change intervention, I used the CBT model as it is the one recommended by the NHS to elicit behavioural change in people with diabetes comorbid with depression (NICE, 2009). However, I could have utilised extra-model tools in conjunction with CBT to reach even better results, such as the Health Belief Model (HBM), which consists of six core beliefs that predict the reason individuals will take action to prevent, screen for or control a condition. These are (1) perceived susceptibility to illness – refers to how likely an individual thinks they are to get a condition, (2) perceived severity of the illness – refers to how intensely an individual feels about catching an illness or leaving it untreated, (3) perceived benefits of carrying out the behaviour – refers to an individual's opinion of how effective a suggested treatment/intervention will be at reducing the effect of the illness, (4) perceived costs involved in carrying out the behaviour – refers to the potential negative aspects of a specific health action, (5) cues to action – refers to external or internal signs that can trigger an individual to act and (6) self-efficacy – refers to an individual's confidence in his/her ability to follow a behaviour (Tavakkoli, Mahmoodi, & Attarian, 2018; Ogden, 2012; Glanz, Rimer, & Viswanath, 2008). The HBM suggests that these beliefs should be used to predict the likelihood that a behaviour will occur and to design long or short-term health behaviour interventions (Orji, Vassileva & Mandryk, 2012). Several authors reported findings showing that health education with the HBM promotes self-care behaviour in people with diabetes (Tavakkoli et al., 2018; Khiyali, Manoochri, Jeihooni, Heydarabadi & Mobasheri, 2017; Shabibi et al., 2017; McElfish et al., 2016; Ayele, Tesfa, Abebe, Tilahun & Girma, 2012). However, there is a scientific debate as to which constructs of the HBM are directly associated with the management of diabetes. For example, contrary to Ogden (2012), who suggests that perceived susceptibility and perceived barriers are the main predictors of health behaviour, other authors propose that high susceptibility increases the likelihood of behavioural change in diabetic patients, regardless of the perceived barriers (Dehghani-Tafti et al., 2015). However, it has been reported that individuals often underestimate their own susceptibility to illness (Redding, Rossi, Rossi, Velicer, & Prochaska, 2000). Further studies suggest that perceived severity and perceived benefits are the factors significantly related to diabetes self-management (Adejoh, 2014). Research has also provided support for the role of cues of action in predicting health behaviours, in particular external cues such as information input (e.g. through educational interventions) (Ogden, 2012). Contrary to these findings, Carpenter (2010) reports that the relationship between perceived susceptibility and behavioural change is near zero, whereas other authors question the overall effectiveness of the HBM in behavioural change (Kissal & Kartal, 2019; Jones et al., 2016; Taylor, 2007).

The HBM focuses mainly on health determinants and seems, therefore, suitable for addressing the self-management issues identified by the service users: poor or absence of monitoring their blood glucose and poor diet patterns. Weller, Baer, Nash and Perez (2017) suggest that self-monitoring of blood glucose is a significant component of the daily management of diabetes and of adopting a healthy diet. However, a meta-analysis of 12 randomised controlled trials showed that self-monitoring of blood glucose only had a small effect over time, as it subsided after 12 months of initiation and did not offer significant health-related quality of life to individuals (Malanda et al., 2012). Hanley et al. (2015) explored the experiences of people with T2D who participated in a randomised controlled trial of blood glucose self-monitoring. The results showed that self-monitoring supported individuals' medical treatment and self-care decisions and increased their motivation to change their unhealthy diet (Hanley et al., 2015). Similarly, Kenealy et al. (2015) found that engaging individuals in self-management of blood glucose led them to take a more active role in the overall self-management of their diabetes. However, both of these studies did not report long-term adherence results. Research suggests that the HBM constructs are significantly effective in promoting self-care behaviours and raising knowledge about T2D after a well-structured education programme has been used (Shabibi et al., 2017; Adejoh, 2014). In addition, increasing the perceived susceptibility, severity, benefits, barriers and the self-efficacy among service users through education would be more likely to influence behavioural change and self-care of T2D (Shabibi et al., 2017). Studies also suggest that self-efficacy is a strong predictor of behavioural change, in particular change associated with healthy dietary patterns (Wirth, James, Fafard, & Ochipa, 2014; Gallager et al., 2012; Wingo et al., 2012).

I believe that once the depression symptoms of service users had reached a satisfactory level, I could have designed and introduced detailed educational sessions targeting diabetes self-management based on HBM constructs. These would suggest that self-management of service users' diabetes is dependent on (1) perception of susceptibility to T2D health complications, (2) perception of the severity of T2D in relation to self-management, (3) outcomes of comparing the benefits of prevention of hypoglycaemia versus the costs of inconvenience of using lancets to prick fingers, (4) increased awareness of the role of blood glucose monitoring in diabetes complications and (5) level of confidence in service users remembering to regularly monitor their blood glucose levels. Additionally, educational sessions could have included information about T2D, presentations on the impact of T2D on health, handouts with instructions on identified topics of interest (e.g. blood glucose monitoring instructions) and guest specialists (e.g. nutritionists, endocrinologists) offering expertise and input and answering service users' questions. The improvement of depression symptoms would be an important initial objective as behavioural change interventions require active participation. Considering that the service users in this case were working towards overcoming their depression, I would approach carefully the use of the HBM, as depression significantly complicates the self-management of diabetes (Gonzalez et al., 2007; Lustman et al., 2000). Furthermore, I could have utilised motivational interviewing to elicit service users' views and difficulties, with the goal of generating more adaptive coping strategies (Harvey, 2015; Dellasega, Anel-Tiangco, & Gabbay, 2012).

The CBT interventions that took place at WLMHT offered one-on-one sessions to service users. Thinking retrospectively, I could have suggested creating a group for the individuals who had controlled their depression and were willing and motivated to improve their T2D management. Research shows that group sessions encourage participants to engage in discussions and tasks, enable them to feel more socially supported and empowered, and improve their perceived control over their T2D and overall psychological functioning (Ghasemi, Hosseini, & Sabouhi, 2019; Mohebbi, Tol, Sadeghi, Mohtarami, & Shamshiri, 2019; Aziz et al., 2018; Habibzadeh, Sofiani, Alilu, & Gillespie, 2017). However, other studies argue that group sessions could put added pressure on individuals and recommend voluntary thought sharing to minimise this risk (Harvey, 2015).

A weakness of the HBM is that it seems to ignore the emotional factors of the decision-making process on health-related behaviours (e.g. 'I will monitor my blood glucose because I fear that my leg will be amputated.') and focuses instead on the rational aspects of this process (Ogden, 2012). As symptoms of depression influenced the inactivity of service users in the first stages of the interventions, the HBM would have needed to be used with caution. Another criticism of the HBM suggests that it mainly addresses the behaviour itself rather than the intention to behave (Sheeran & Abraham, 1996). While working with individuals in these interventions, I noticed that their intention to change their behaviour was a significant factor in alleviating their depression symptoms and improving the self-management of their T2D. This intention was, therefore, considered an important aspect of the intervention. Furthermore, the HBM puts the emphasis on the person and not on the potential role of social and economic environment on their behaviour (Adejoh, 2014; Ogden, 2012). Social and economic circumstances are relevant in this case and needed to be considered when planning and delivering the intervention. Several service users reported that the increase in the price of fruits and vegetables over the years was a barrier to adapting a healthy eating pattern, causing them to engage in unhealthy dietary patterns. Others mentioned that family food habits and inappropriate food offers from friends were an extra barrier to adopting a healthy diet. These factors cannot be ignored as they significantly affect individuals' behaviours and adherence. However, despite its limitations, the HBM could be used in conjunction with other aspects (e.g. taking into account intention to change, emotional aspects of service users, social and economic background) and could assist towards the adaptation of healthier behaviours for service users.

Another approach that could be considered to support behavioural change in people with diabetes with comorbid depression is CBT specific for adherence and depression (CBT-AD), a sub-type of CBT which has been used in the past in individuals with human immunodeficiency virus and depression (Safren et al., 2009; Safren, Gonzalez, & Soroudi, 2007). CBT-AD is based on traditional CBT approaches to the treatment of depression combined with intervention techniques most applicable to individuals with chronic conditions. It is grounded in the idea that there is an iterative relationship between difficulties in self-managing chronic conditions and depression and that by improving self-management, individuals engage in targeted behavioural activation and gain feelings of self-efficacy (Esbitt, Batchelder, Tanenbaum, Shreck, & Gonzalez, 2015). In this case, CBT-AD would consist of a 12-session intervention focused initially on adherence of diabetes self-management and, in subsequent steps, on depression and diabetes adherence simultaneously (Gonzalez et al., 2010; Safren et al., 2007). These sessions would incorporate psychoeducation about diabetes and depression and motivational interviewing exercises to improve depression and diabetes self-management, behavioural activation techniques to increase activities that involve pleasure, cognitive restructuring specifically designed for negative automatic thoughts on diabetes self-management, problem-solving interventions to assist service users to select an achievable action plan, and breathing and relaxation techniques to teach service users coping skills and ways to relax in stressful situations (Safren et al., 2009; Safren et al., 2007).

An important aspect of CBT-AD is that it tries to help service users change their cognitions about self-care behaviour by suggesting positive reasons for adherence (e.g. 'With proper diabetes management, I will be able to do more activities that I like.'). It also encourages individuals not to concentrate on cognitive barriers that might stop adherence and trigger depressive symptoms (e.g. 'Diabetes limits me.') but to actively think of positive motivations when trying to self-manage their condition. This model combines and suggests specific educational interventions with specific cognitive and behavioural techniques to achieve behavioural adherence and improve the symptoms of depression. Furthermore, studies have suggested that CBT-AD has shown some positive outcomes for people with diabetes and depression (Esbitt et al., 2015; Safren et al., 2014; Markowitz et al., 2012; Gonzalez et al., 2010). However, additional interventions are needed to establish its effectiveness in this population. It has not been used in inpatient mental health settings, where service users often express severe symptoms of depression. These patients are usually harder to engage and require more time to improve their depression symptoms. CBT-AD requires a high level of engagement from the beginning to proceed to the next steps, which would make me cautious about implementing it in an inpatient setting. An additional criticism of CBT-AD is that it does not consider the emotional roots of the depression, therefore failing to prevent future relapses (Gipps, 2017). The model primarily addresses current issues and treats the maintaining, rather than the underlying causes of depression (Gipps, 2017; Spector et al., 2012). Furthermore, due to its tight structure, CBT-AD allows little room for the flexibility that might be needed in inpatient mental health settings.

A number of other frameworks have been used to address barriers and facilitators experienced by people managing diabetes (e.g. Theoretical Domains Framework, Transtheoretical Model). The Transtheoretical Model of behavioural change (TTM) is an integrative model developed by Prochaska and DiClemente (1982). The TTM describes the processes involved in generating and maintaining change in order to understand people's behavioural changes and assess their readiness to change a behaviour. Furthermore, the TTM suggests that different people are in different stages of change and provides strategies to assist individuals to change the desired behaviour through stages of motivational readiness (Hashemzadeh, Rahimi, Zare-Farashbandi, Alavi-Naeini, & Daei, 2019; Han, Gabriel, & Kohl, 2017). The elements that form the TTM include:

1. Stages of change, which suggest that behavioural change is a process that unfolds over time. They consist of five stages that people need to pass through in order to achieve behavioural change: (1) precontemplation – not intending to make any change, (2) contemplation – considering making a change, (3) preparation – making a small change, (4) action – actively engaging in a new behaviour and (5) maintenance – sustaining the change over time (Ogden, 2012; van Leer, Hapner, & Connor, 2008).
2. Processes of change, which are the covert and overt activities that people utilise in order to progress through the stages (Glanz et al., 2008).
3. Decisional balance, which refers to an individual's perception of the pros and cons that could result from the behaviour change (Gokbayrak, Paiva, Blissmer, & Prochaska, 2014; Glanz et al., 2008).
4. Self-efficacy, which refers to a person's confidence that they can continue to engage in the healthy behaviour when faced with challenging situations. It also recognises the potential temptation an individual might have to engage in the unhealthy behaviour again (Hashemzadeh et al., 2019; Glanz et al., 2008).

An individual's progress across the stages of change is flexible and often not linear as the theory perceives behavioural change as a dynamic process rather than an 'all or nothing' one (Ogden, 2012). For example, a person can move between the preparation and contemplation stages several times before progressing to the action stage. It is also possible for a person who has reached the maintenance stage to move back to the contemplation stage over time (Ogden, 2012). Howe (2005) describes the TTM as a cyclic model that acknowledges relapse as part of the process of behavioural change. While working with the service users, I noticed that their main fear was that they would not be able to maintain the healthy behaviours once achieved and that they might relapse to their previous unhealthy behaviours, which would result in the subsequent increase of their depression symptoms. Part of successful maintenance is the ability to return to healthy behaviour following a relapse (van Leer et al., 2008). The TTM does not stigmatise relapse but instead includes it as part of the process for behavioural change, which leads me to believe that I could have utilised the TTM in this intervention. Additionally, this specific population (people with diabetes comorbid with depression) requires a less limitative and more flexible model that allows individuals to move towards behavioural change at their own pace and without pressure – something the TTM offers. For these reasons, the TTM seems relevant to diabetes management as positive results in adherence, blood glucose self-monitoring and the adoption of a healthy diet have been reported in studies that used it (Arafat et al., 2019; Holmen et al., 2016; Bawadi, Banks, Ammari, Tayyem, & Jebreen, 2012; Natarajan, Clyburn, & Brown 2002).

In this case, the behavioural change intervention would operationalise the TTM and would consist of educational sessions and workshops on self-monitoring of blood glucose and adoption of healthy dietary patterns. Initially, I would educate the participants about the different stages of the TTM, my purpose being to instigate reflection in order for them to identify their current stage and to consider how to proceed further and achieve the aimed behavioural change. Next, depressive symptoms would be assessed with the Center for Epidemiologic Studies Depression scale, a validated and highly reliable psychometric tool, which has been used in diabetes populations in the past (Holmen et al., 2016; Schram, Baan, & Pouwer, 2009). Also, I think that it would be useful for the reflection process to include asking the individuals to complete pre-session and post-session feedback forms addressing their expectations, goals, thoughts and outcomes for each session. In this way, participants could compare the stage at which they thought they were before the session and the stage at which they feel they are after the session. Acknowledging their movement through the stages could promote discussions of relapse prevention and could enhance participants' determination and will to overcome perceived obstacles and adopt the desired behaviour (van Leer et al., 2008).

Gomez and Saldana (2008) reported in their review that moving through the stages was associated with increased self-monitoring of blood glucose. Similarly, in their meta-analysis, Noar, Benac, and Harris (2007) suggested that tailoring health behaviour messages to the stages of change is effective in encouraging self-management of blood glucose. However, other studies report inconclusive results on the TTM's effectiveness for diabetes management (Partapsingh, Maharaj, & Rawlins, 2011; Salmela, Poskiparta, Kasila, Vahasarja, & Vanhala, 2009; Logue et al., 2005). Criticisms of the model suggest that it is difficult to determine direct causation between behavioural change and the stages, as most of the studies based on the model have used cross-sectional designs that do not allow for conclusions about the role of different causal factors at the different stages (Ogden, 2012). To my knowledge, there is only one study that used the TTM and included in its sample people with diabetes comorbid with depression (Menchine, Marzec, Solomon, & Ajora, 2013). The results showed that 81.8% of participants demonstrated advanced readiness to change their health behaviour to better manage their diabetes (Menchine et al., 2013). However, only 34% of participants reported depressive symptoms, which limits the generalisability of the results in this population. Perhaps future studies of a longitudinal design could use and test the effectiveness of the TTM for behavioural change in similar populations. Despite the criticisms, I believe that, in this case, the TTM would have been the best option among the discussed models. The TTM could have been useful for participants to understand their readiness to change their behaviour and their move through the stages of change, as it offers a clear process to follow and considers relapse as part of the behavioural change process.

My experience in the field of health psychology is still growing and, reflecting retrospectively, I identified other elements that could have been incorporated to deliver a better intervention. I think that, in the future, better results could be achieved by using non-didactic, collaborative methods (such as combining screening and treatment for depression with intervention programmes about T2D self-management) and by adopting a team approach. The components of such an intervention would include the involvement of allied health professionals, the careful design and planning of a well-structured educational programme, and therapeutic sessions. Sartorius (2018) reports that the notion that treatment for depression must go hand in hand with changing adverse health behaviours in diabetes is gradually gaining acceptance and support from healthcare services. Depression affects the management of diabetes and, if poorly controlled, can become a vicious cycle. Individuals with diabetes comorbid with depression require certain skills (e.g. diabetes awareness, identifying triggers in depression) to improve their depression and to develop psychological and practical tools to effect behavioural change in T2D management. My retrospective analysis has taught me that the incorporation of different guidance tools when planning interventions is of utmost importance to link, understand and explore individuals’ beliefs, attitudes and behaviours. This will subsequently inform my practice and my goal is to work hard towards improving it so that I can offer quality services where needed.

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Appendix 1

CBT Formulation

Trigger situations
Stressful events, places, relationships, practical problems

↓

Thoughts
What ideas run through your mind?
How do you interpret the situation?

West London
Mental Health
NHS Trust

Appendix 2

Mood and Thought Record Diary

Situation/ Trigger	Emotion (rate 0-100%)	Unhelpful thoughts (rate belief 0-100%)	Facts that support unhelpful thoughts	Facts that provide evidence against the	Alternative, more realistic and balanced perspective	Outcome (re-rate emotion)

				unhelpful thoughts		
Eating chocolate bar and candies	Guilty 90% Anxious 60%	Eating chocolate and candies will worsen my diabetes and I will die 90% My depression is responsible for the worsening of my diabetes 90%	Depression makes it harder to manage my diabetes Chocolate and candies are not ideal as part of my diet	Many people have overcome depression and are back in their lives When I think of that I feel that there is hope foe me too	I currently face a condition that makes it hard for me to manage my diabetes. Through the professional help I am receiving I can overcome this and focus on my diabetes again	Guilty 60% Anxious 30%

Unit 4: Teaching and training

Case study 1:

Living with learning disabilities and schizophrenia; training for the staff of the *Westminster Society*

INTRODUCTION

The *Westminster Society* is a London-based charitable organisation which provides services to people with learning disabilities (often comorbid with mental health conditions) and their families. The organisation was founded in 1962 by parents with the aim to improve the local services that were available for children with learning disabilities. Since then the organisation has grown and now supports both adults and children. The *Westminster Society* delivers services to Westminster, Camden, Islington, Harrow, and the Royal Borough of Kensington and Chelsea. The services provided include supported living, intervention and preventative services, registered care, short breaks, community services, domiciliary care, and family support.

I have been working at the *Westminster Society* as a support worker for almost six years now. I am currently working in an adult supported living accommodation services where my role involves supporting vulnerable adults with tasks of daily living by enabling them to access activities and interests which meet their personal goals and ambitions. The Team Manager of the service approached me and proposed whether I would be interested in providing training to the staff of the service in regards to learning disabilities comorbid with schizophrenia. He was aware of my placement at WLMHT and that was the reason for approaching me. As I was given the opportunity to expand and broaden my skills by designing and delivering training to professionals, I expressed an interest in this role. As I am employed as support worker, I have the experience upon which to reflect about how, and in what context health psychology could best suit the role of a support worker in a challenging environment.

PLANNING, DELIVERY, AND EVALUATION

The role of the health psychologist as a trainer involves the sharing of knowledge and skills (Michie & Abraham, 2004). I wanted to make sure that I would be able to pass my professional experience to my colleagues in the most efficient and beneficial way. The Team Manager suggested that the training should focus on the practical side of living with learning disabilities and schizophrenia. By *practical* he meant the deeper understanding of specific experiences, actions and reactions that affect the course of every-day life of the service-users.

The Team Manager and I agreed that the workshop should tackle specific service user's needs identified as: noise sensitivity, temperature regulation, and visual processing in schizophrenia. In essence, most of the staff did not have medical or nursing training/experience, so I suggested that we did not include any complicated terminology. The Team Manager and I decided that it would be better to deliver a one-day workshop as it would be easier for people to attend. We agreed that the workshop would take place on January 12th 2017, from 09:30 until 16:30 at the service's office in Shirland Road on a weekday. After arranging when the workshop would take place and what was expected from me, I started to plan the workshop. As a professional trainee health psychologist, I wanted to ensure that I would be able to draw from my professional experience in order to provide an evidence-based training. The next step was to arrange a meeting with my supervisor at WLMHT. She is the Consultant Psychologist for psychology inpatient services and has extensive experience of working with people who have both learning disabilities and schizophrenia. She suggested a number of topics that would have a practical interest when working with people with schizophrenia: noise sensitivity, thermoregulation, visual processing, auditory hallucinations vs thoughts, and medication side-effects.

Since I started working at the *Westminster Society,* I have worked with a number of service users and I have seen how hard is for them to fully understand what is happening when experiencing a psychotic episode or a side-effect of the medication. I have also seen how challenging it is for the staff to manage or prevent the escalation of a psychotic episode when it occurs. I have therefore drawn from these challenges when composing the structure of the training in order to help staff to better understand the psychosocial impact of psychosis on people with learning disabilities. A vital part and challenge for the trainer is to manage and fully engage the participants. I was hoping to plan and deliver a training workshop through which participants would be able to acquire the capacity to improve their work performance. The aim was to develop and create training that is participant-centred and not trainer-centred, which is interactive rather than didactic, and promotes support between peers (Michie & Abraham, 2004). I decided not to overload the slide presentation (please see Appendix 1) with endless texts, and add multimedia material which I believed would better engage the participants.

On the day of the workshop I came to a common agreement with the participants as to when to have tea and lunch breaks. The successful delivery of the training took place at the arranged date and time. During the course of the training I experienced the individuals as being very interested in the information that I provided as they were interacting and participating throughout the workshop. According to the verbal feedback I received during and after the workshop, the use of multimedia for pointing out the experience of auditory hallucinations was one of the parts of the workshop that participants found extremely beneficial and informative. Following the end of the workshop I kindly asked the participants to fill in some feedback forms (please see Appendix 2) for a written evaluation. The Team Manager also completed an evaluation form regarding the quality of the training (please see Appendix 3). Both evaluations suggested that the training was successful.

REFLECTION

For quite some time I had felt quite strongly about wanting to share the knowledge I had gained from working in a mental health trust with the rest of the team. When the Team Manager gave me the opportunity by asking me to deliver the training, I felt both excited and nervous as it would have been the first time where I would have been delivering a one day workshop. I have delivered presentations in the past in various institutions but those usually lasted around two hours. However, as I was familiar with the subject of the workshop, I was able to be confident in the planning and delivering of the training. My main concern was to keep the training interesting throughout the day. As the feedback suggests, the participants found the workshop both helpful and engaging. The members of staff who attended expressed an interest in potentially arranging similar workshops in the future. The Team Manager and I were delighted with this proposition and we let them know that this is something we could definitely plan on doing in the future. I felt that the knowledge, skills and professional experience which the support workers brought to the training were invaluable. Overall, I was delighted with the facilitation of the workshop and the provided feedback.

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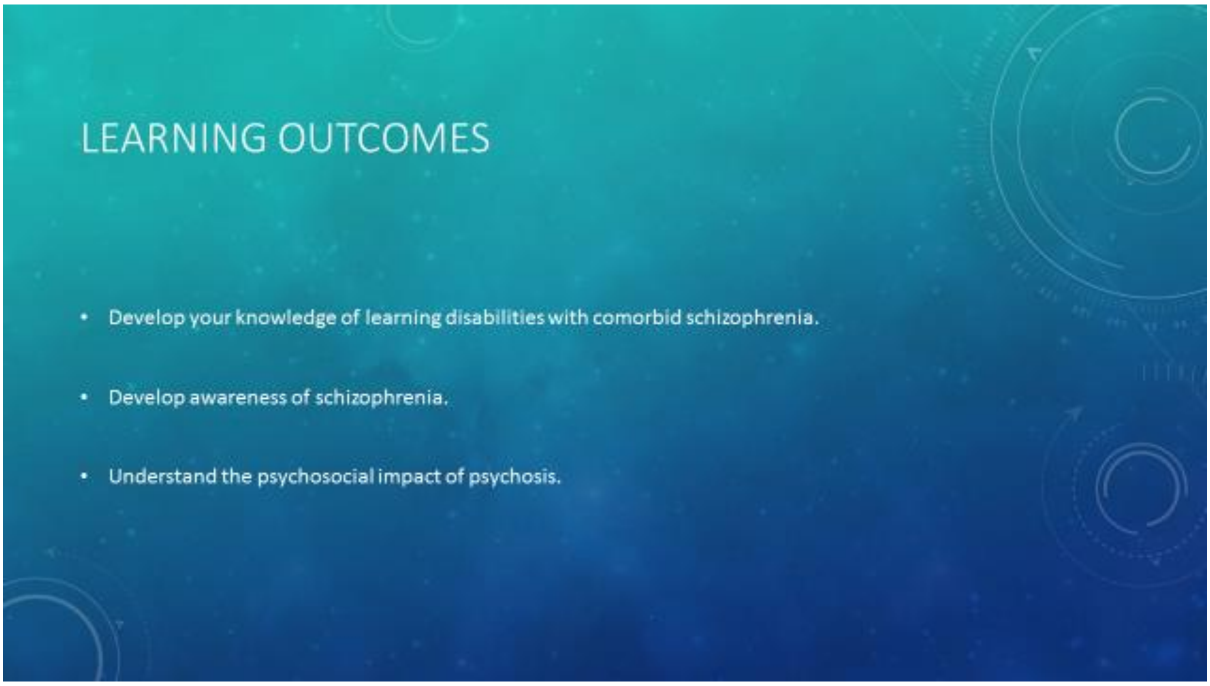
Appendix 1

PowerPoint Presentation

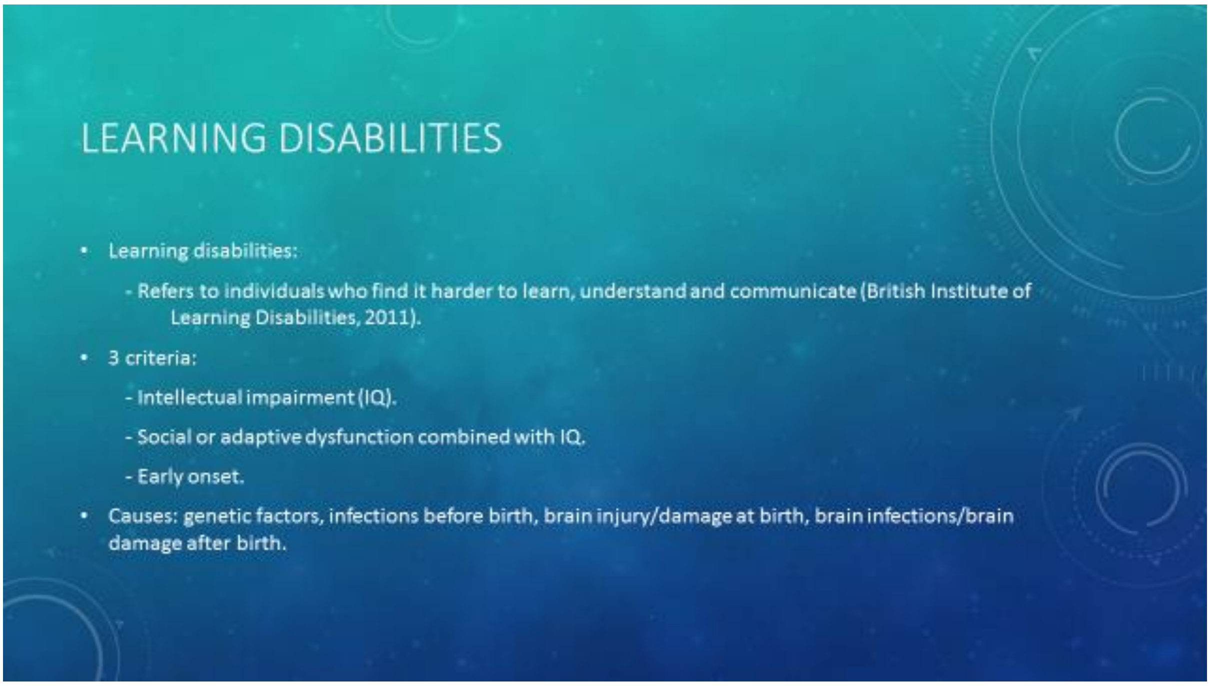
LIVING WITH LEARNING DISABILITIES AND SCHIZOPHRENIA

A PRESENTATION BY ANASTASIOS TOUMPANAKIS



LEARNING OUTCOMES

- Develop your knowledge of learning disabilities with comorbid schizophrenia.
- Develop awareness of schizophrenia.
- Understand the psychosocial impact of psychosis.



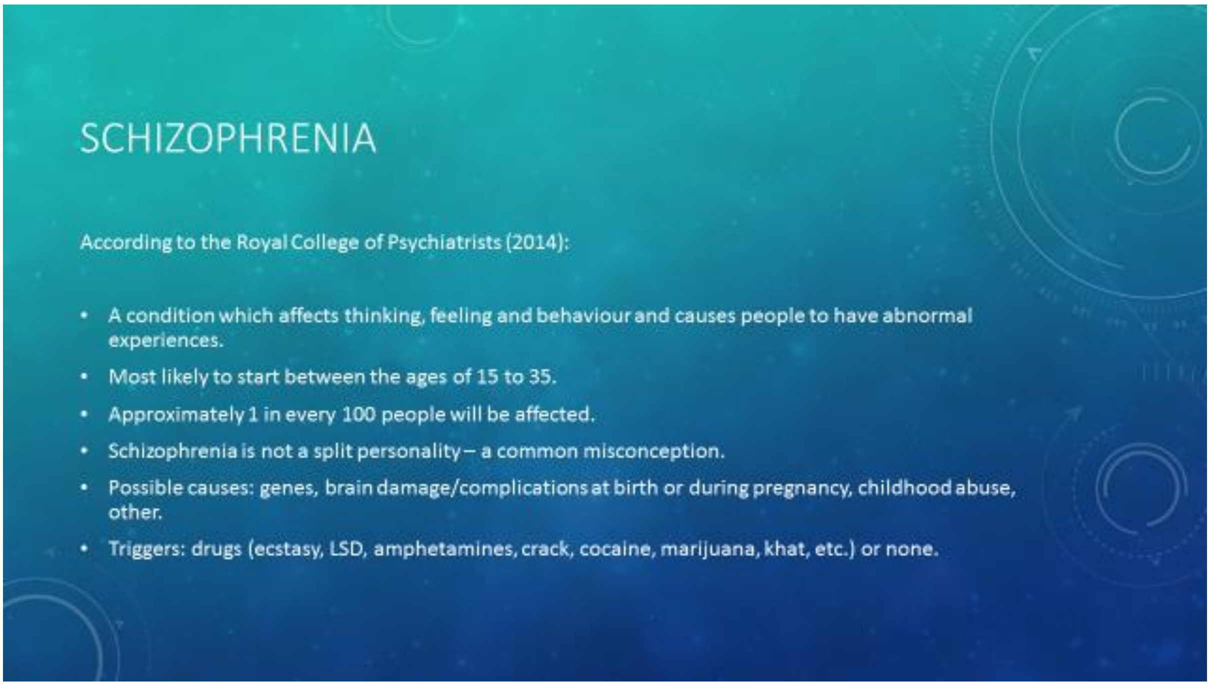
LEARNING DISABILITIES

- Learning disabilities:
  - Refers to individuals who find it harder to learn, understand and communicate (British Institute of Learning Disabilities, 2011).
- 3 criteria:
  - Intellectual impairment (IQ).
  - Social or adaptive dysfunction combined with IQ.
  - Early onset.
- Causes: genetic factors, infections before birth, brain injury/damage at birth, brain infections/brain damage after birth.

LEARNING DISABILITIES (CONT.)

According to the Learning Disabilities Observatory (2016) and Papworth Trust (2016):

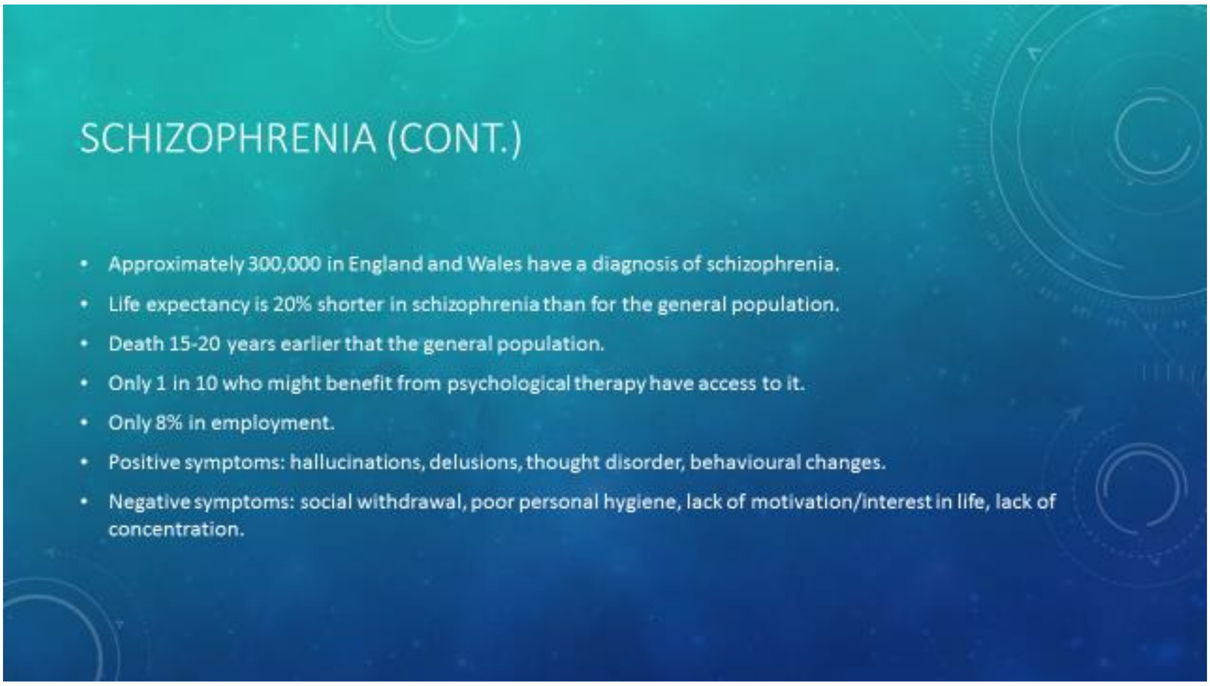
- Approximately 1,100,000 people in England have a learning disability; 2% of the general population.
- Mortality: About 20 years younger than those who do not have learning disabilities.
- Employment: Approximately 94% of adults with learning disabilities are unemployed.
- People with learning disabilities are more likely to be obese.
- People with learning disabilities are 10 times more likely to have serious sight problems.



SCHIZOPHRENIA

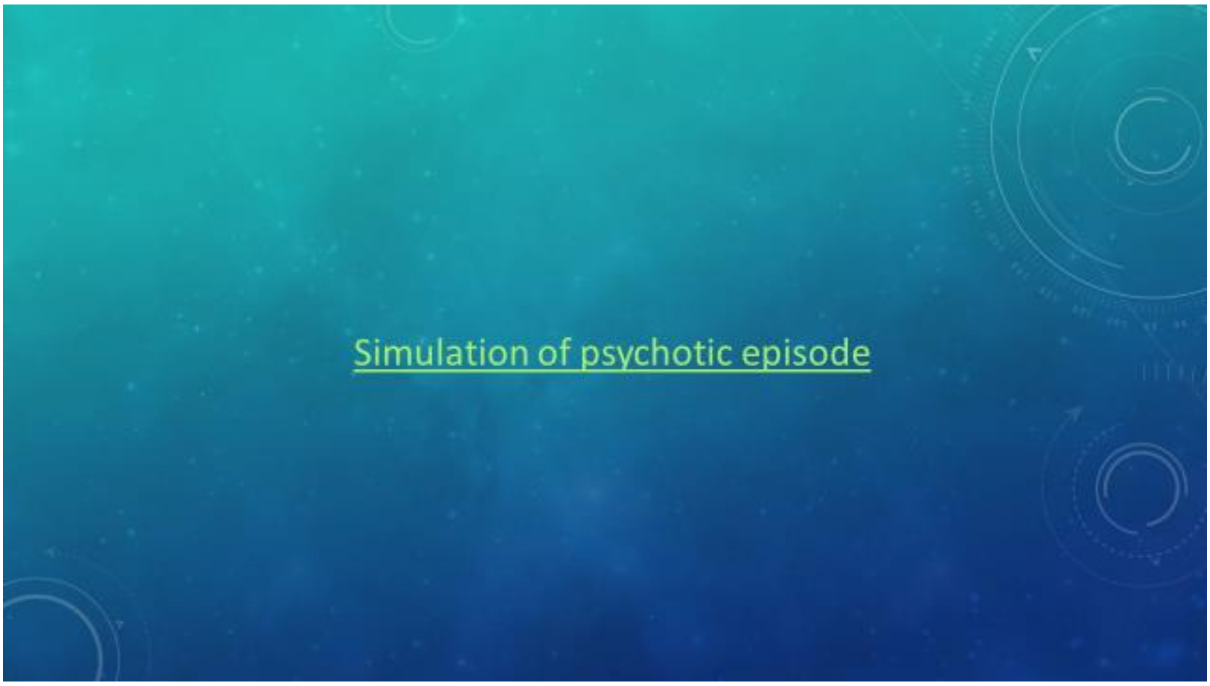
According to the Royal College of Psychiatrists (2014):

- A condition which affects thinking, feeling and behaviour and causes people to have abnormal experiences.
- Most likely to start between the ages of 15 to 35.
- Approximately 1 in every 100 people will be affected.
- Schizophrenia is not a split personality – a common misconception.
- Possible causes: genes, brain damage/complications at birth or during pregnancy, childhood abuse, other.
- Triggers: drugs (ecstasy, LSD, amphetamines, crack, cocaine, marijuana, khat, etc.) or none.

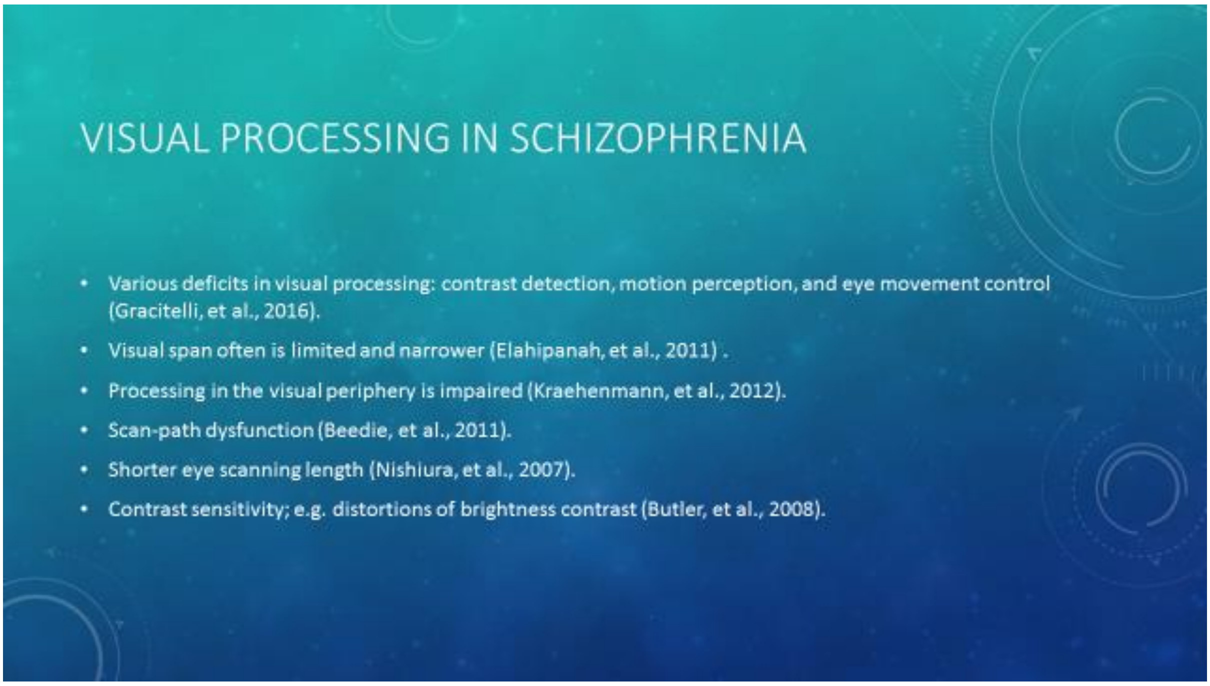


SCHIZOPHRENIA (CONT.)

- Approximately 300,000 in England and Wales have a diagnosis of schizophrenia.
- Life expectancy is 20% shorter in schizophrenia than for the general population.
- Death 15-20 years earlier that the general population.
- Only 1 in 10 who might benefit from psychological therapy have access to it.
- Only 8% in employment.
- Positive symptoms: hallucinations, delusions, thought disorder, behavioural changes.
- Negative symptoms: social withdrawal, poor personal hygiene, lack of motivation/interest in life, lack of concentration.



Simulation of psychotic episode

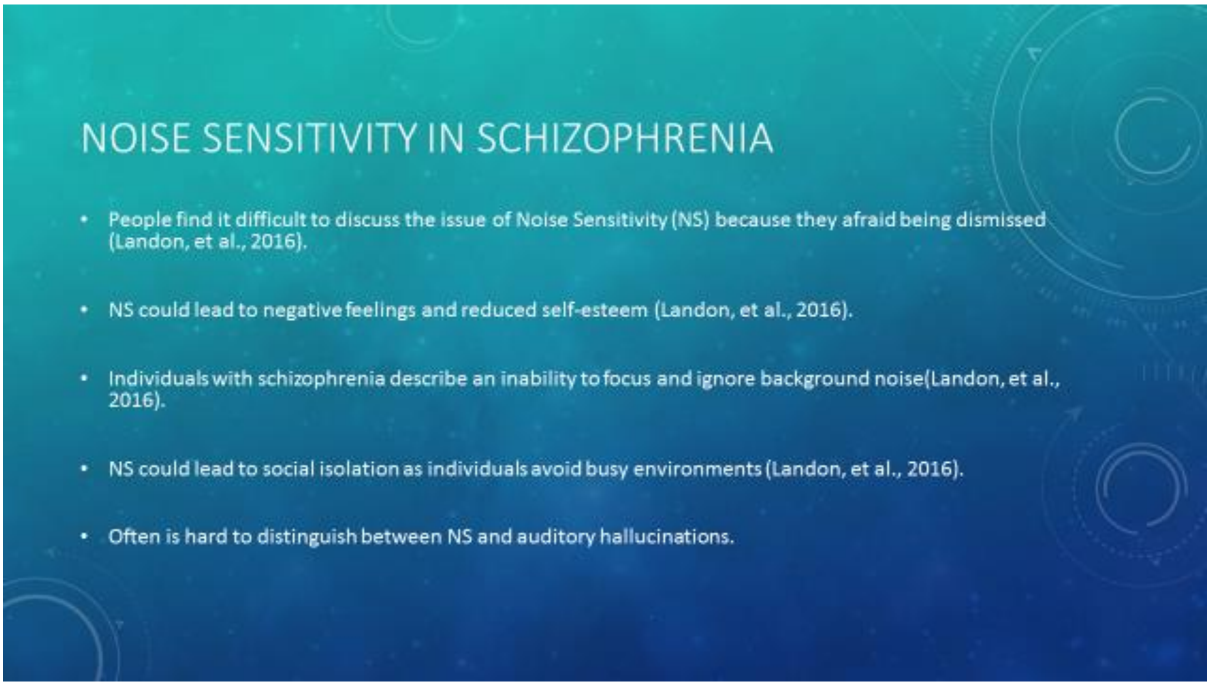


VISUAL PROCESSING IN SCHIZOPHRENIA

- Various deficits in visual processing: contrast detection, motion perception, and eye movement control (Gracitelli, et al., 2016).
- Visual span often is limited and narrower (Elahipanah, et al., 2011) .
- Processing in the visual periphery is impaired (Kraehenmann, et al., 2012).
- Scan-path dysfunction (Beedie, et al., 2011).
- Shorter eye scanning length (Nishiura, et al., 2007).
- Contrast sensitivity; e.g. distortions of brightness contrast (Butler, et al., 2008).

TEMPERATURE REGULATION IN SCHIZOPHRENIA

- Altered thermoregulation (the process which allows the body to maintain its core temperature) (Chong & Castle, 2004).
- Abnormal fluctuation of core/body temperature perception (Chong & Castle, 2004).
- Monitor the water intake during hot season – danger of dehydration/overhydration.

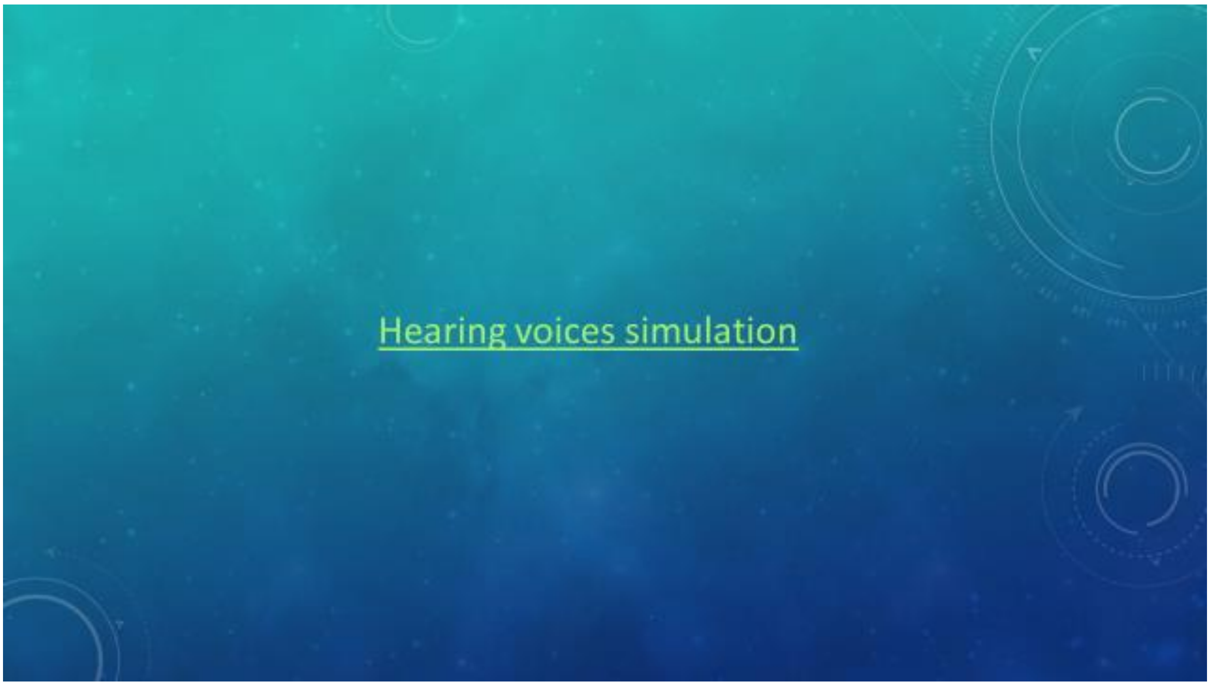


NOISE SENSITIVITY IN SCHIZOPHRENIA

- People find it difficult to discuss the issue of Noise Sensitivity (NS) because they afraid being dismissed (Landon, et al., 2016).
- NS could lead to negative feelings and reduced self-esteem (Landon, et al., 2016).
- Individuals with schizophrenia describe an inability to focus and ignore background noise(Landon, et al., 2016).
- NS could lead to social isolation as individuals avoid busy environments (Landon, et al., 2016).
- Often is hard to distinguish between NS and auditory hallucinations.

NOISE SENSITIVITY – SUPPORTIVE MECHANISMS

- Supportive social network.
- Increased awareness of NS among professionals.



Hearing voices simulation

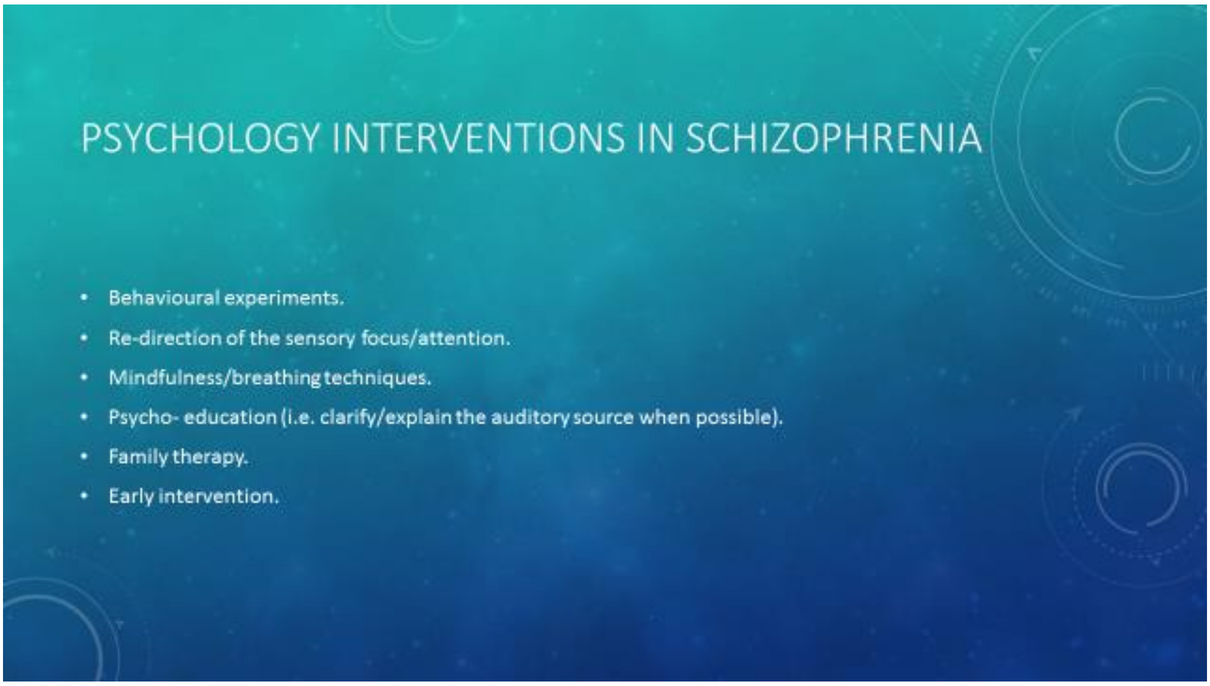
MEDICATION AND SIDE-EFFECTS

- Antipsychotics: Aripiprazole, Risperidone, Haloperidol, Olanzapine, and others.

  Side-effects: Sickness, dizziness, restlessness, double vision, sleeping difficulties, tiredness, itchiness, changes in blood sugar levels/cholesterol/heart function, weight gain, sleepiness, stiffness, and others (British National Formulatory, 2016).

- Benzodiazepines: Lorazepam, Diazepam.

  Side-effects: drowsiness, confusion, muscle weakness, headache, slurred speech, visual disturbances, tremors, incontinence, salivation changes, forgetfulness, and others (British National Formulatory, 2016).



PSYCHOLOGY INTERVENTIONS IN SCHIZOPHRENIA

- Behavioural experiments.
- Re-direction of the sensory focus/attention.
- Mindfulness/breathing techniques.
- Psycho- education (i.e. clarify/explain the auditory source when possible).
- Family therapy.
- Early intervention.

Skhizein

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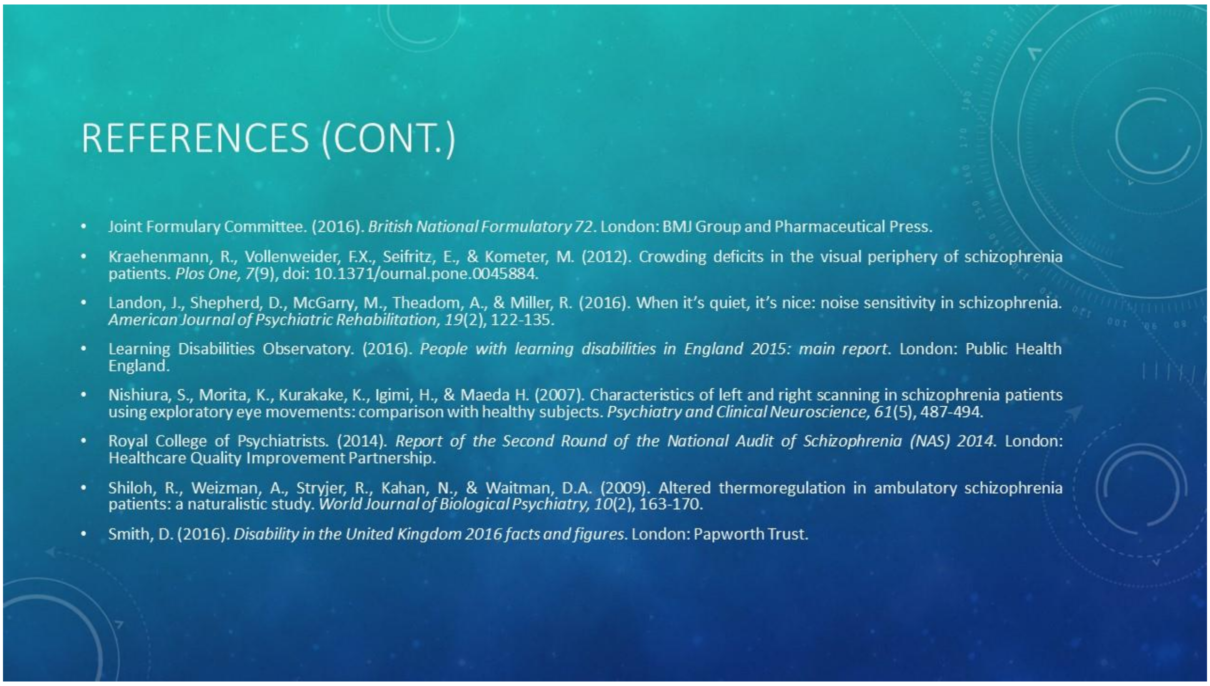

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THANK YOU FOR LISTENING!
ANY QUESTIONS PLEASE?

Appendix 2

Feedback Form

Subject: Living with learning disabilities and schizophrenia training
Date: Thursday 12th January 2017
Location: Shirland Road, London

Training Feedback

a) The professionals have benefited from the provided psychological training

Do not agree				Totally agree
1	**2**	**3**	**4**	**5**
-	**-**	**-**	**37%**	**63%**

b) Psychological training helped you as a professional

Do not agree				Totally agree
1	**2**	**3**	**4**	**5**
-	**-**	**-**	**44%**	**56%**

c) Please rate the psychological knowledge of the Trainee Health Psychologist

Low				High
1	**2**	**3**	**4**	**5**
-	**-**	**-**	**6%**	**94%**

d) Please rate the communication skills of the Trainee Health Psychologist

Low				High
1	**2**	**3**	**4**	**5**
-	**-**	**-**	**6%**	**94%**

e) Was the Trainee Health Psychologist able to answer your questions?

Low				High
1	**2**	**3**	**4**	**5**

		-	-	100%

f) **The objectives of the psychological training have been achieved**

Do not agree				Totally agree
1	**2**	**3**	**4**	**5**
-	-	-	-	100%

g) **I believe that permanent psychological input in the future would be beneficial for our service**

Do not agree				Totally agree
1	**2**	**3**	**4**	**5**
-	-	-	12%	88%

h) **Overall the psychological training was successful**

Do not agree				Totally agree
1	**2**	**3**	**4**	**5**
-	-	-	-	100%

i) **Other comments and suggestions:**

Overall, attendees included responses such as: *insightful training that provided good basis of psychological knowledge and understanding*; *very well presented with very helpful tools such as visual and audio aids*; *very useful; everything was good and great job*; *excellent and interesting, especially the simulations*; *nice videos and simulations*.

The Westminster Society
Your Learning Disability Network for London

Appendix 3

Workplace Evaluation Report

Section 1 - To be completed by the trainee:

Trainee’s name	Anastasios Toumpanakis
Name of workplace contact	The Westminster Society
Nature of work and competence assessed	Nature of work: Psychology Training Workshop Competence assessed: Teaching and Training

Section 2 - To be given to the workplace supervisor to return directly to above address: Views on the Trainee’s Performance on above piece of work (write comments below or email a separate report). Please also comment on any reason for delays in the completion of this piece of work and report any periods of prolonged absence.

Anastasios delivered his presentation on ‘*Living with learning disabilities and schizophrenia*’ to a team of support workers who are employed by a learning disabilities charity (*Westminster Society*) with a view to supporting people with complex needs in a community setting. Anastasios was able to present this work in a pace and using language which was appropriate for the needs of the group. Jargon was avoided and the ideas contained within the presentation were presented in a very stimulating manner with use of accompanying visual and audio tools. In addition, Anastasios displayed a willingness to answer any questions or queries as he proceeded with the presentation and made great effort to explain any ideas or concepts which may have been new to the team. On reflection, I feel that the team has made good use of the information that was presented and many of the ideas raised have been put into practice. I think that this was due partly to the ability of Anastasios to match the information presented with his knowledge of the service users supported by the team and also due to an interesting piece of work being presented in a stimulating manner.

Declaration

I verify that the above-named trainee has undertaken the above-mentioned piece of work. I am of the opinion that it has been completed to a satisfactory professional standard.

Signature: [redacted] Date: 28/02/2017

Unit 4: Teaching and training

Case study 2:

Impact of screening; teaching for the Master of Science Health Psychology students of City, University of London

INTRODUCTION

Being a trainee health psychologist means that you need to adapt in a number of different roles, and among them lies the role of a teacher. I was seeking to further develop my teaching skills when I contacted the Director of the Health Psychology doctorate, and kindly asked whether it would be possible for me to teach one of the Master level Health Psychology lectures. She responded positively and asked if I would be willing to deliver a lecture regarding the '*Impact of screening*'. I immediately accepted as it was a great opportunity for me to expand my teaching skills.

PLANNING, DELIVERY, AND EVALUATION

The lecture was part of the *Behavioural Medicine* module and delivered by me and my academic colleague in DPsych. The Director of the Health Psychology doctorate informed us that the lecture day would be on the 27th of October 2016 and that the lecture would take place at Rhind Building of City, University of London from 09:00 to 12:00. During a brief meeting I had with her it was clarified that the '*screening*' referred to '*cancer screening*' and not to other type of screenings. For example, a pregnancy screening. My academic colleague and I arranged a meeting in order to discuss and decide the structure of the lecture; its learning outcomes and key readings, and who will be responsible for covering what parts of the lecture. We agreed to present an hour and a half each. I was primarily responsible for covering the cancer screening programmes currently available in the UK, details about each type of cancer and, the reported reasons of non-attendance. She covered the psychosocial impact before, during and after screening and how we can make an impact as health psychologists. We also agreed on the learning outcomes of the lecture: developing knowledge of the available screenings in the UK, developing awareness of possible factors that influence screening avoidance, understanding the psychosocial impact of cancer screening and the potential risks associated with the outcome, and critically considering interventions as health psychologists to tackle screening avoidance. Finally, we agreed on which key reading references we would suggest to students prior to lecture (please see Appendix 1).

In order to maximise the success of teaching, it is important to keep it inclusive, interactive, maintaining learner's attention and engagement, building positive attitudes, taking into consideration learners' knowledge, contributing actively to the educational process, and others (Kaufman, 2003; Wlodkowski, 1999). I have been myself on the learner's side and therefore when I was planning my part of the lecture my main focus was on making the teaching interactive and engaging in order to maintain students' interest. I initially conducted a literature review in regards to the available cancer screening programmes in the UK, cancer statistics, non-attendance reasons, and health psychology theories that could give an explanation to non-attendance. Following the literature review I focused my attention on how to better engage the students during the lecture. My aim was to manage to intrigue them and invoke in them a curious mind as future health psychologists. I also decided to benefit from using multimedia material in order to maintain their interest throughout the lecture. My academic colleague and I were in contact during the time of the preparation so as to be able to take on board each other's recommendations and make amendments in regards to the subjects, the format of the slide presentation (please see Appendix 2), and the lecture's evaluation forms. It had been agreed that I would begin the delivery of the lecture between 09:00 and 10:30, and she would deliver the second part of the lecture between 10:30 and 12:00. We agreed to meet at the lecture room about an hour earlier in order to carry out a quick mock lecture. This alleviated any nerves I had and aided in being calm and centred when the lecture started. At the beginning of the lecture I addressed the learning outcomes and let the students decide when they would prefer to have a break. During the lecture the students seemed engaged to the presented subject through their interactions with her and myself. My aim was to promote and provoke a psychology minded thinking approach by asking students to comment on the topics that we covered. After my part of the lecture was over, my academic colleague continued with the delivery of the second half and the lecture was over by 12:00.

In order to obtain written evaluation, we handed out feedback forms to students (please see Appendix 3). The Director of the Health Psychology doctorate was present during the lecture and provided an observer's report (please see Appendix 4). Both the feedback forms and observer's report suggested that the lecture was successful. My academic colleague and I stayed a little longer and had a discussion about the topics we had covered with the students on the day. After the end of the lecture, she and I gave verbal feedback to each other and pointed out what we could do differently for future reference. Some of the slides could have been less repetitive and in addition, the font that was chosen could have been clearer for the audience. We were both satisfied with our collaboration in preparing and delivering the lecture and for obtaining a successful result.

REFLECTION

Getting positive feedback from both the students and the module leader was very encouraging for me on a personal level. Preparing and delivering the lecture was a valuable addition to my knowledge and skills. I consider the preparation of the lecture to have been of utmost importance, especially considering the fact that I was not initially familiar with the subject. Moreover, I was happy for the great level of communication and collaboration I have had with my academic colleague. We were both supportive of each other and shared ideas during the preparation period which alleviated any nerves I had and boosted both our self-esteem. My aim was to deliver a lecture that would broaden students' intellectual and applied skills and the feedback that I received suggested that the aim was accomplished. In addition to that, the positive feedback that I received suggested that students particularly valued the interactive approach. Overall, I was very happy that the students asked questions throughout the lecture and I attribute this to them having a genuine interest in the material that they were presented with.

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Appendix 1

Learning Outcomes and Reading References

Module: Behavioural Medicine, HYM003

Module Leader

Dr Angeliki Bogosian

Module outline and aims

The rationale of the module is to provide students with the skills to critically evaluate empirical evidence and theoretical models in behavioural medicine. This will include behaviours associated with health outcomes. You will also have exposure to practical administration of some psychometric tests.

The module aims:

1. To develop your awareness of assessment strategies in behavioural medicine.
2. To develop your basic knowledge of interventions within the context of behavioural medicine.
3. To enable you to critically appraise the current knowledge, theory and empirical research in behavioural medicine.

List of Sessions:

1. Introduction to the course and behavioural medicine
2. Health behaviours
3. Smoking cessation
4. Adherence
5. Obesity
6. Neuropsychology and cancer
7. Sexual health & HIV research
8. **Impact of screening**
9. Alcohol and illicit drug use
10. Symptom awareness & illness perceptions in chronic eye disease

Sessions overview

I will like to give students some information about the session you will be giving during the semester. Please give a few learning outcomes (2 to 5) for the session and some key reading references:

Lecturers	Anastasios Toumpanakis & Emily Robson
Name of the session	Impact of screening
Day / Time	24th November / 9am - 12pm
Learning outcomes	- Develop your knowledge of available screenings in the UK, particularly focusing on cancer - Develop awareness of possible factors that influence screening avoidance - Enable you to critically consider interventions as Health Psychology professionals in order to tackle screening avoidance - Understand the psychosocial impact of cancer screening and the potential risks associated with outcome
Reading references	- Brodersen, J., & Siersma, V. D. (2013). Long-term psychosocial consequences of false-positive screening mammography. *Annals of Family Medicine, 11*(2), 106-115. - Cooke, R., & French, D.P. (2008). How well do the theory of reasoned action and theory of planned behaviour predict intentions and attendance at screening programmes? A meta-analysis. *Psychology and Health, 23*(7), 745-765. - Cordella, M., Poiani, A., & SpringerLink eBook Collection (2014). *Behavioural oncology: psychological, communicative, and social dimensions*. New York: Springer New York. - Hall, N.J., Rubin, G.P., Dobson, C., Weller, D., Wardle, J., Ritchie, M., & Rees, C.J. (2015). Attitudes and beliefs of non-participants in a population-based screening programme for colorectal cancer. *Health Expectations: an International Journal of Public Participation in Health Care and Health Policy, 18*(5), 1645-1657.

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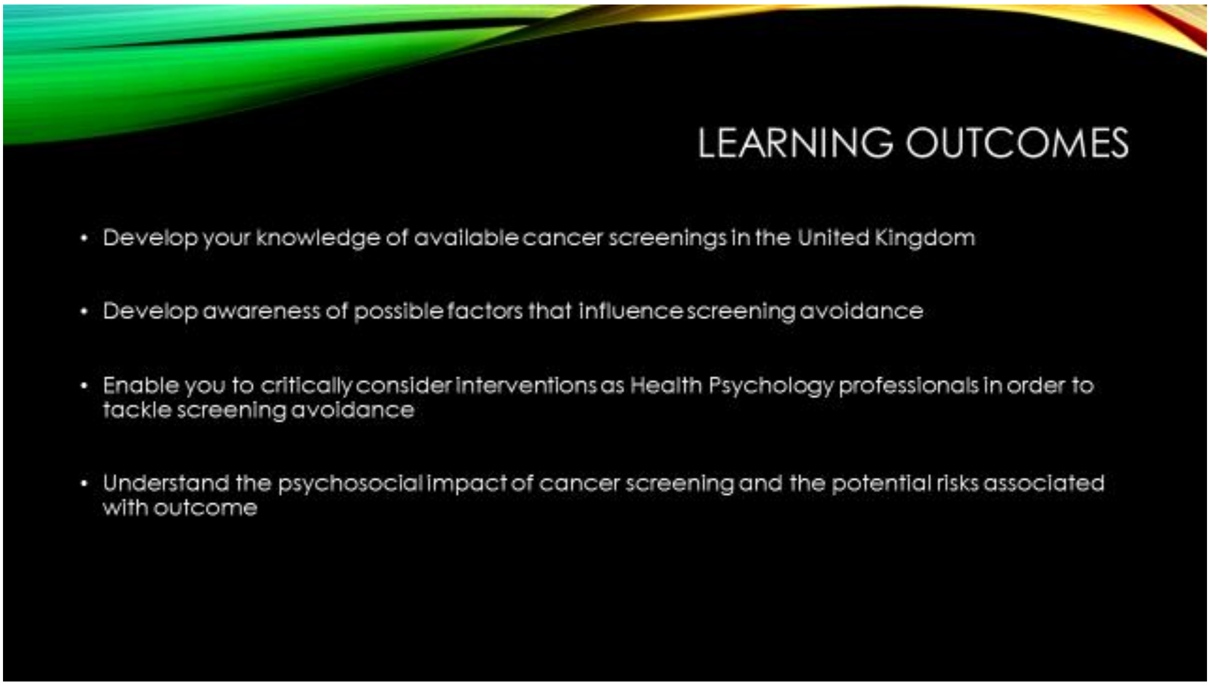
Appendix 2

PowerPoint Presentation

IMPACT OF SCREENING

A presentation by Emily Robson and Anastasios Toumpanakis



LEARNING OUTCOMES

- Develop your knowledge of available cancer screenings in the United Kingdom
- Develop awareness of possible factors that influence screening avoidance
- Enable you to critically consider interventions as Health Psychology professionals in order to tackle screening avoidance
- Understand the psychosocial impact of cancer screening and the potential risks associated with outcome

POPULATION SCREENING PROGRAMMES IN THE UK

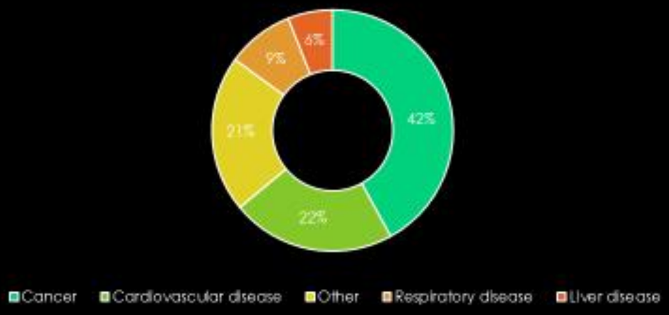
- National Health Service (NHS) offers:
  - Abdominal aortic aneurism programme
  - Diabetic eye screening programme
  - Fetal anomaly screening programme
  - Infectious diseases in pregnancy screening programme
  - Newborn and infant physical examination screening programme
  - Newborn blood spot screening programme
  - Newborn hearing screening programme
  - Sickle cell and thalassaemia screening programme

AVAILABLE CANCER SCREENING PROGRAMMES IN THE UK

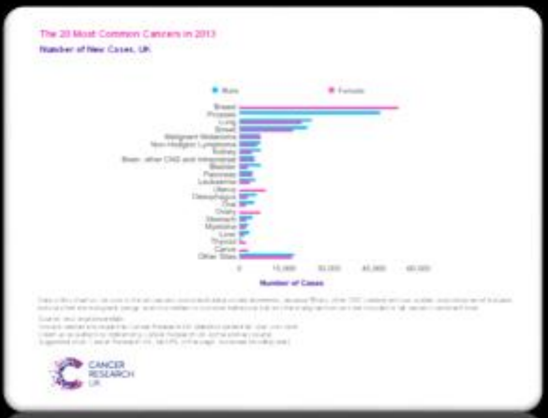
- NHS bowel cancer screening
- NHS breast screening
- NHS cervical screening

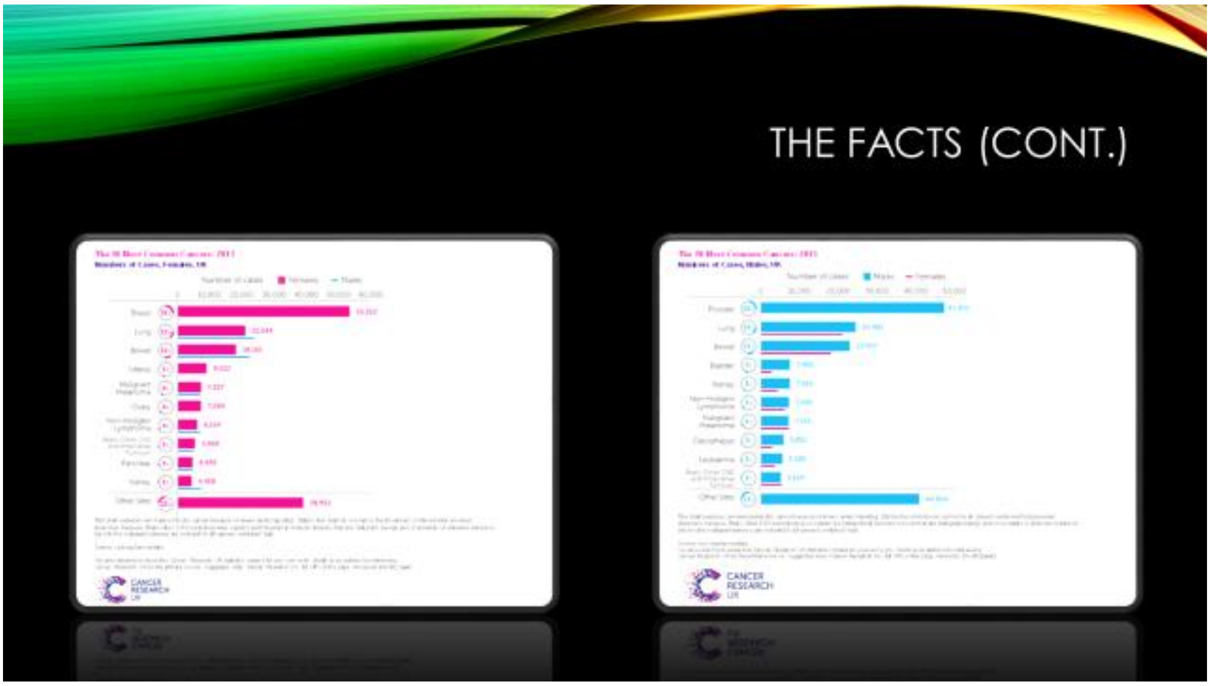
THE FACTS

Percentage of all deaths for people aged under 75 years in the UK
Source: Department of Health, 2014



THE FACTS (CONT.)





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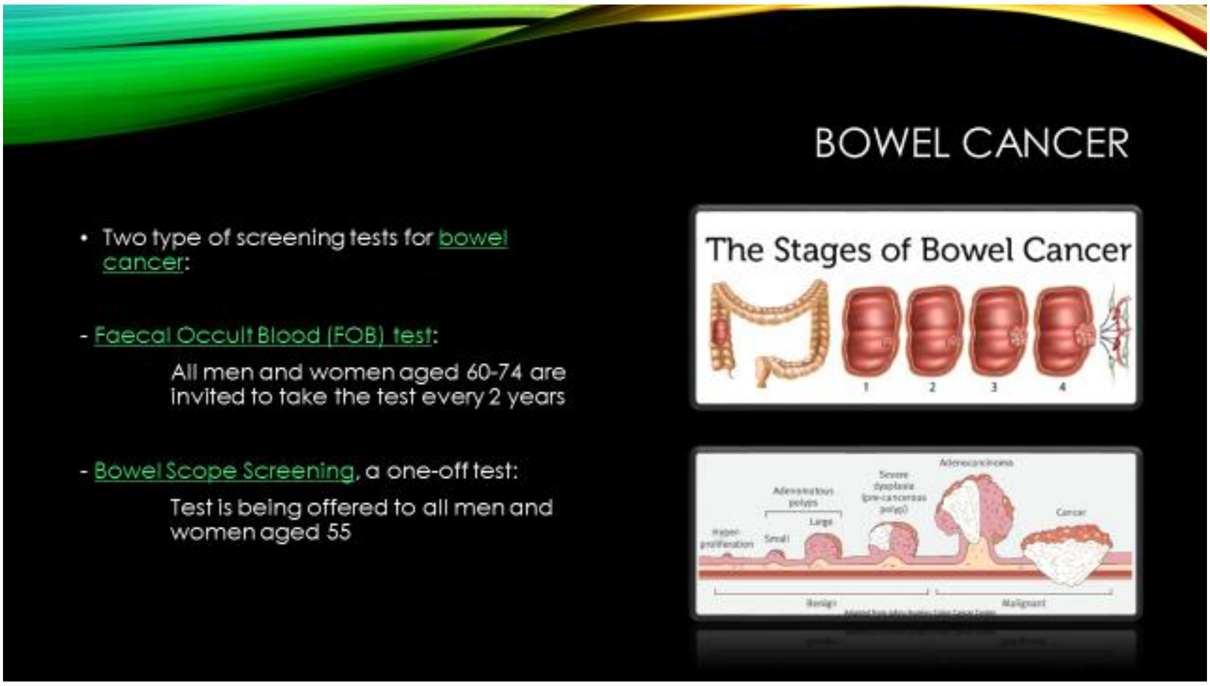


BOWEL CANCER

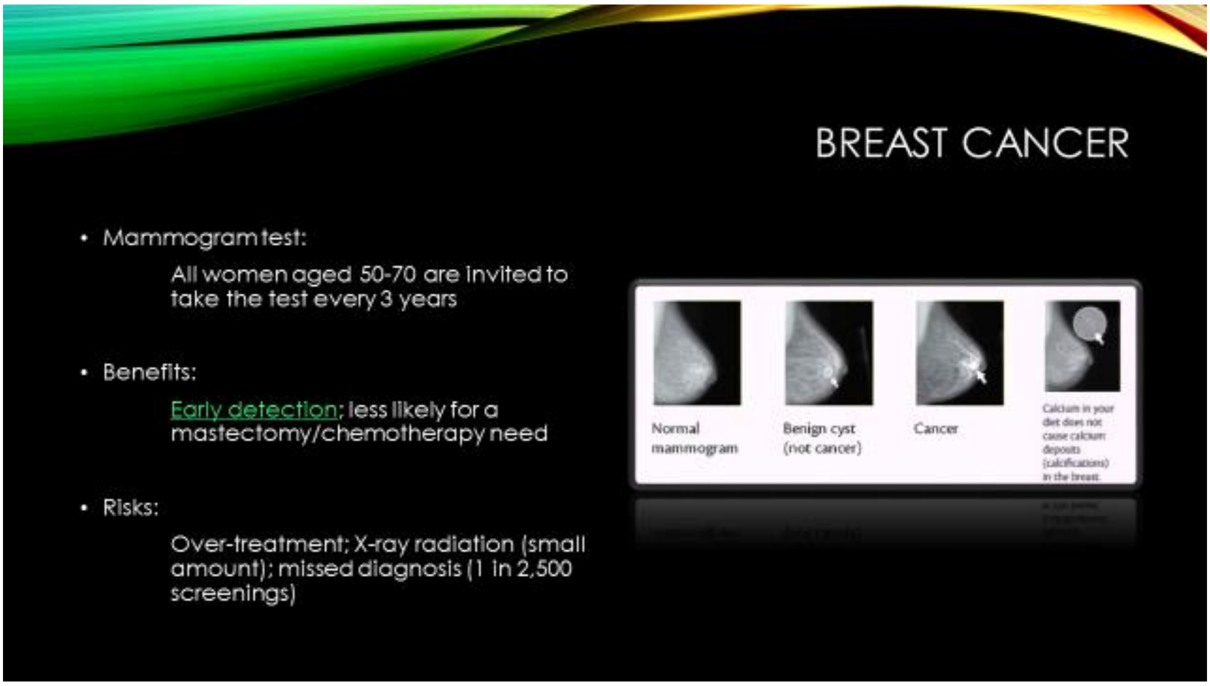
- Two type of screening tests for bowel cancer:

- Faecal Occult Blood (FOB) test:

All men and women aged 60-74 are invited to take the test every 2 years

- Bowel Scope Screening, a one-off test:

Test is being offered to all men and women aged 55



BREAST CANCER

- Mammogram test:

  All women aged 50-70 are invited to take the test every 3 years

- Benefits:

  Early detection; less likely for a mastectomy/chemotherapy need

- Risks:

  Over-treatment; X-ray radiation (small amount); missed diagnosis (1 in 2,500 screenings)

CERVICAL CANCER

- Cervical screening (smear test):

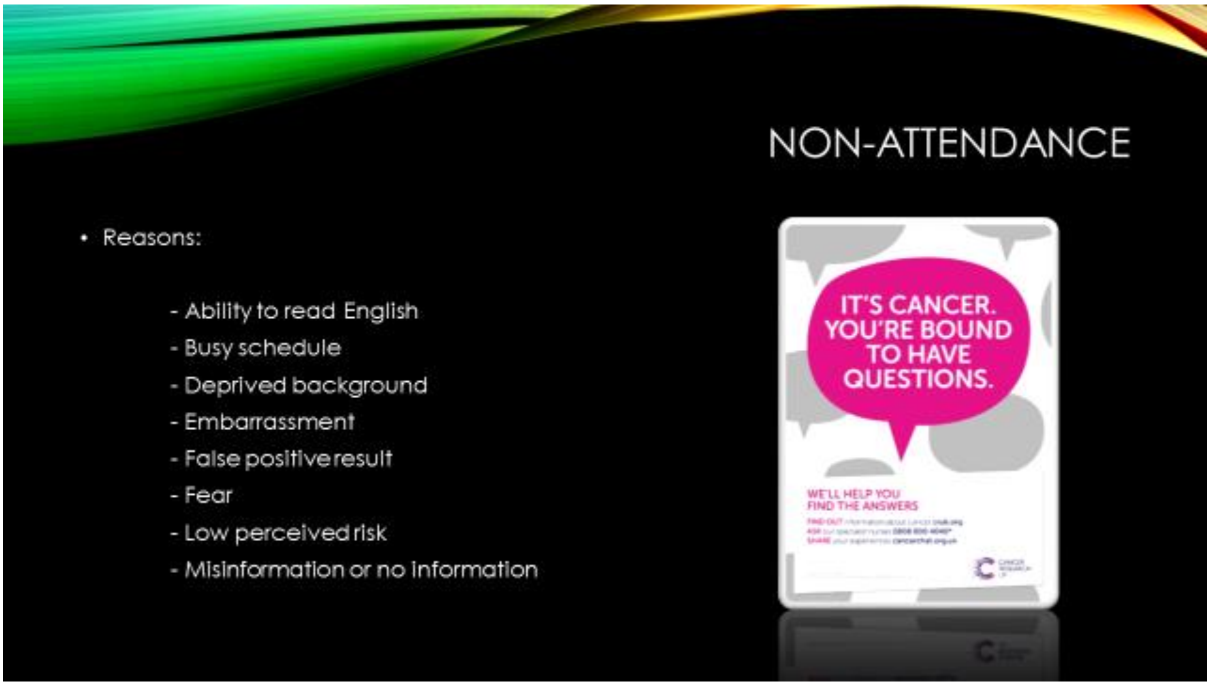
  - Women aged 25-49 are invited to take the test every 3 years

  - Women aged 50-64 are invited to take the test every 5 years

- Not recommended for:

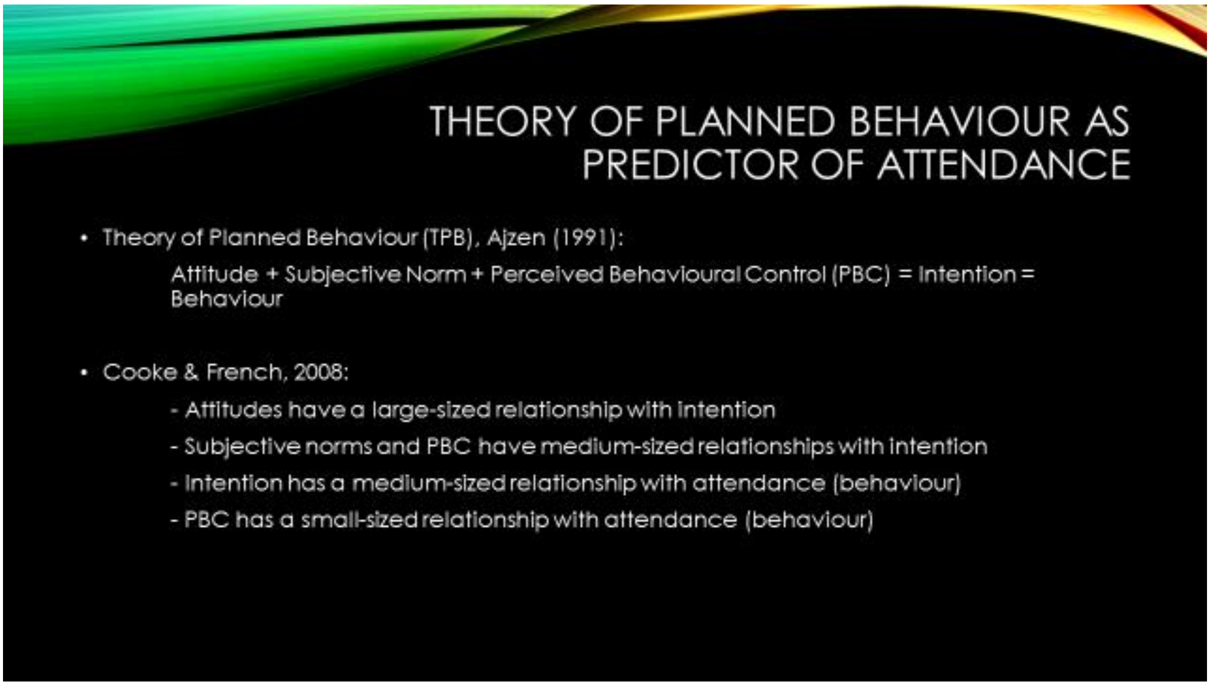
  Aged 65 and over; pregnancy; total hysterectomy; symptoms of cervical cancer

Emma's story



NON-ATTENDANCE

- Reasons:
  - Ability to read English
  - Busy schedule
  - Deprived background
  - Embarrassment
  - False positive result
  - Fear
  - Low perceived risk
  - Misinformation or no information



THEORY OF PLANNED BEHAVIOUR AS PREDICTOR OF ATTENDANCE

- Theory of Planned Behaviour (TPB), Ajzen (1991):

  Attitude + Subjective Norm + Perceived Behavioural Control (PBC) = Intention = Behaviour

- Cooke & French, 2008:

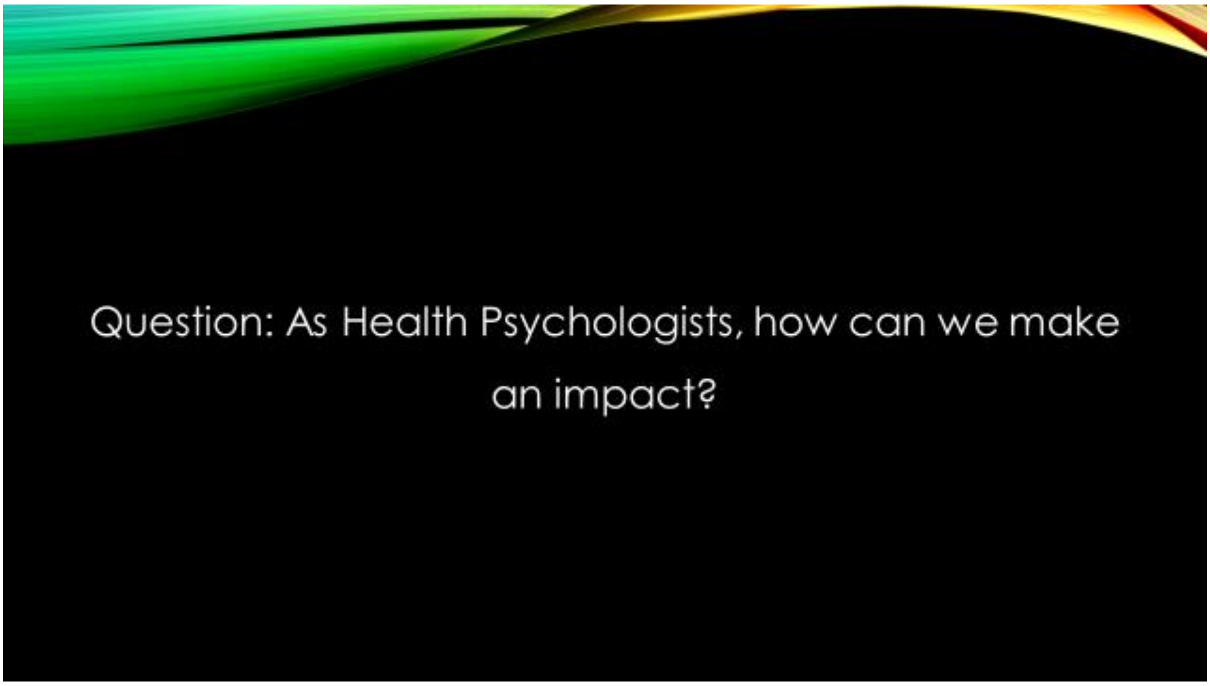
  - Attitudes have a large-sized relationship with intention
  - Subjective norms and PBC have medium-sized relationships with intention
  - Intention has a medium-sized relationship with attendance (behaviour)
  - PBC has a small-sized relationship with attendance (behaviour)

MORE FACTS

- Cancer is currently among the leading cause of both morbidity and mortality worldwide (WHO, 2014)
- 1 in 2 adults in the UK will be diagnosed with cancer (Ahmad, Ormiston-Smith & Sasieni, 2015)
- UK survival figures are lower than those in Australia, Canada and Demark (Office for National Statistics, 2016a)

MORE FACTS (CONT.)

- Breast, prostate, lung and colorectal cancers had the highest number of recorded cases in the UK in 2014 (Office for National Statistics 2016b)
- The majority of overall cases were registered among the elderly (those aged 70 years and over) (Office for National Statistics, 2016b)
- Influencing risk factors can include; physical carcinogens (e.g. radiation and exposure to ultraviolet); chemical carcinogens (e.g. exposure to asbestos and tobacco smoke); and biological carcinogens (e.g. infections and exposure to certain viruses and bacteria) (WHO, 2015)



Question: As Health Psychologists, how can we make an impact?

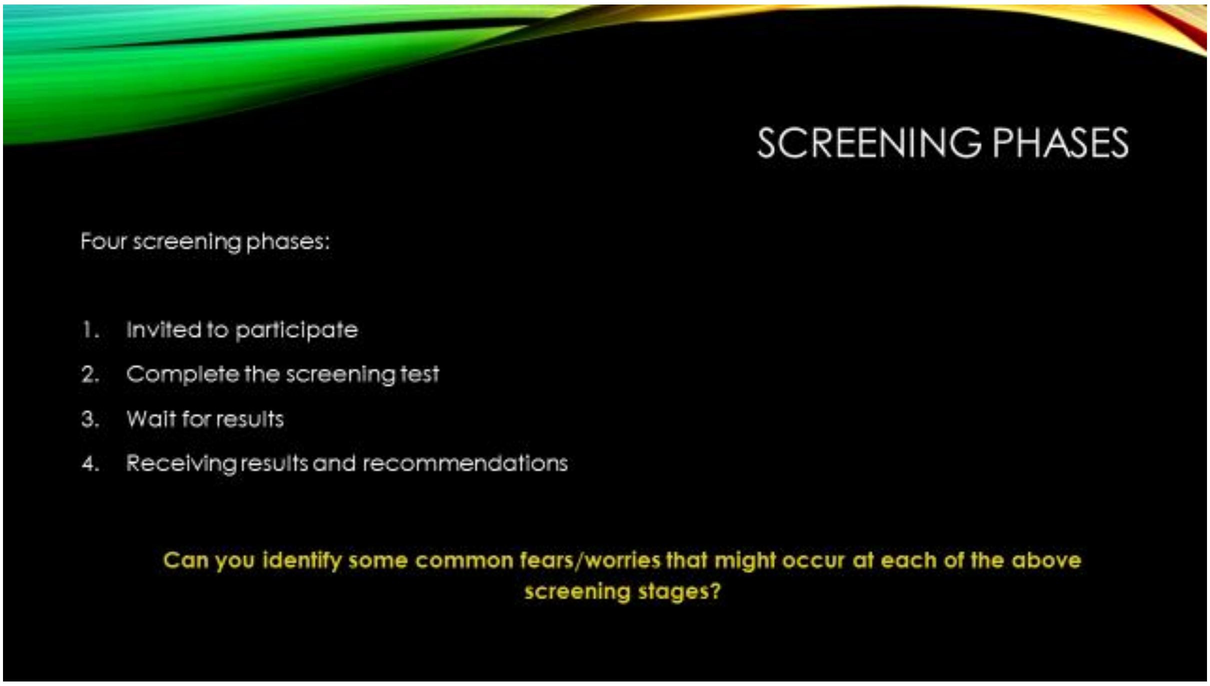
WHY SCREEN?

- Improving outcomes for cancer patients: prevention and early diagnosis

  - Public awareness of the potential signs and symptoms of cancer
  - Understanding of when and how to seek help (Public Health England, 2016)

- Early diagnosis:

  - Cancers detected at an early stage are often easier to treat, and show better survival than later staged cancers



SCREENING PHASES

Four screening phases:

1. Invited to participate
2. Complete the screening test
3. Wait for results
4. Receiving results and recommendations

Can you identify some common fears/worries that might occur at each of the above screening stages?

ETHICAL ISSUES OVER SCREENING?

- Large numbers of people are tested – many screened
- May have negative effects – do the costs outweigh the benefit?
- Conflict between research and practice
- Consent – invitation to participate presupposes consent, and can not be withdrawn
- Confidentiality of medical information - how confidential are test results and patient data?

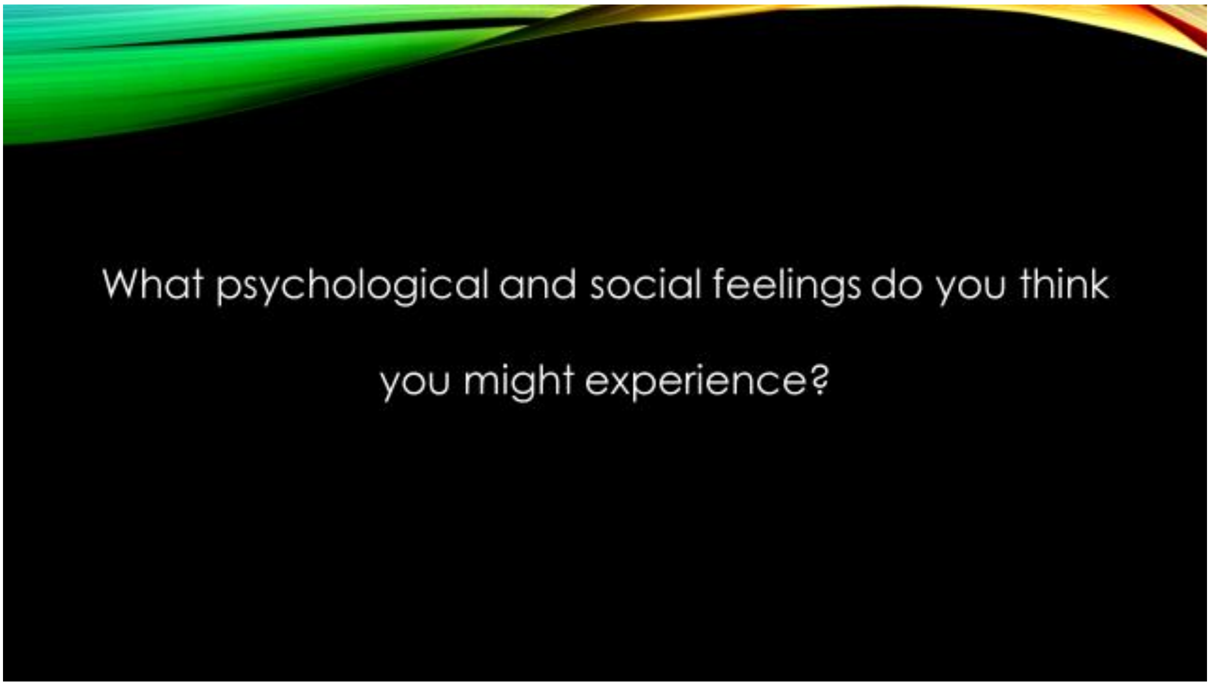
SCREENING RISKS

- Screening - withholding or delaying diagnosis
- Social support
- Potential of genomic testing – advantages/disadvantages

- Breast cancer screening:
  - Women that receive a false-positive outcome from screening are more likely to suffer from long-term psychosocial harm (3 years after result)
  - Those with false-negative outcome are believed to be calmer (Brodersen & Siersma, 2013)

PSYCHOSOCIAL ISSUES AT DIAGNOSIS

- Breaking bad news
- Timing and waiting for results
- Seeking out help
- Social support
- Coping style and strategies
- Health beliefs
- Pre-diagnosis psychological well being
- Decision making around treatment - challenging treatment/ process and side effects
- Fear of subsequent recurrence/pain/death

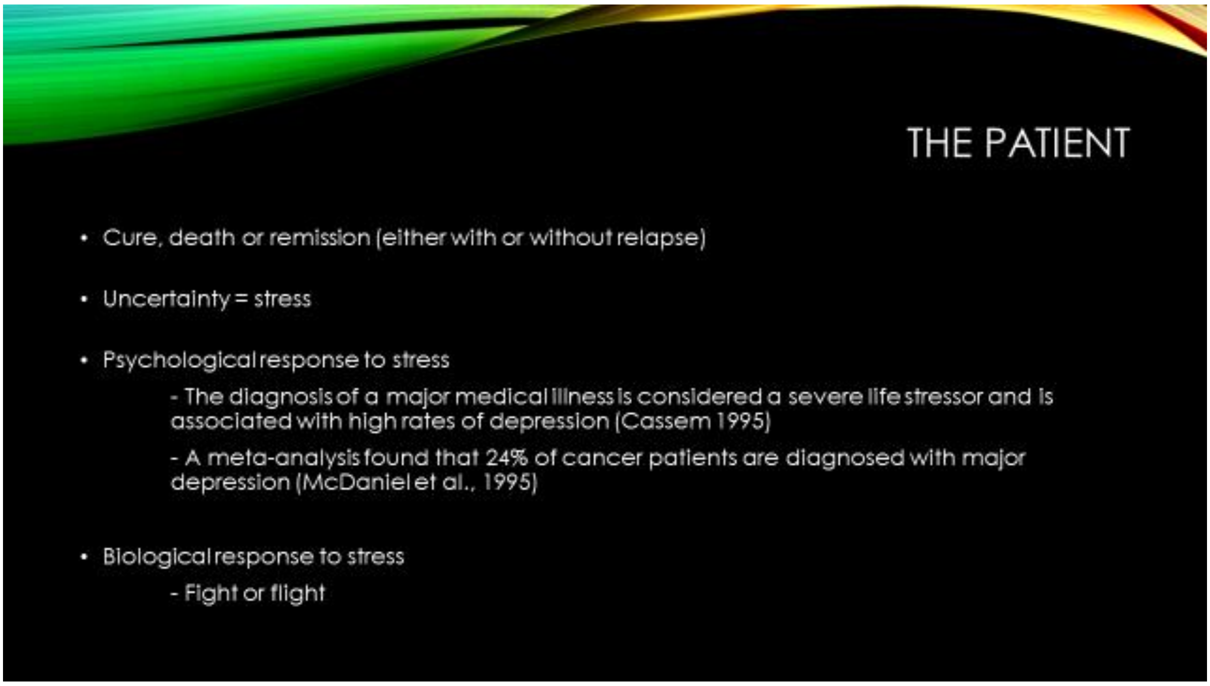


What psychological and social feelings do you think

you might experience?

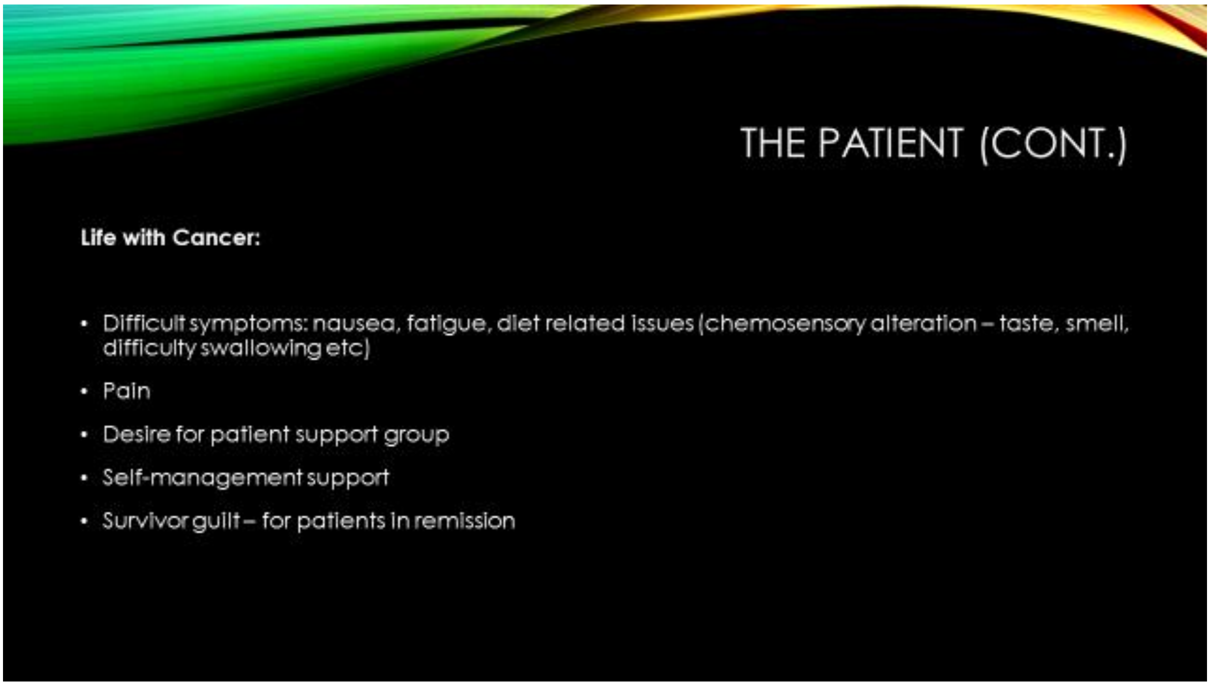
PSYCHOSOCIAL ISSUES DURING TREATMENT

- Hospital admission
- Fear of treatments
- Surgery
- Loss of body image
- Loss of self esteem
- Family relationships - rejection by partner
- Quality of life
- Stigma of cancer
- Side-effects



THE PATIENT

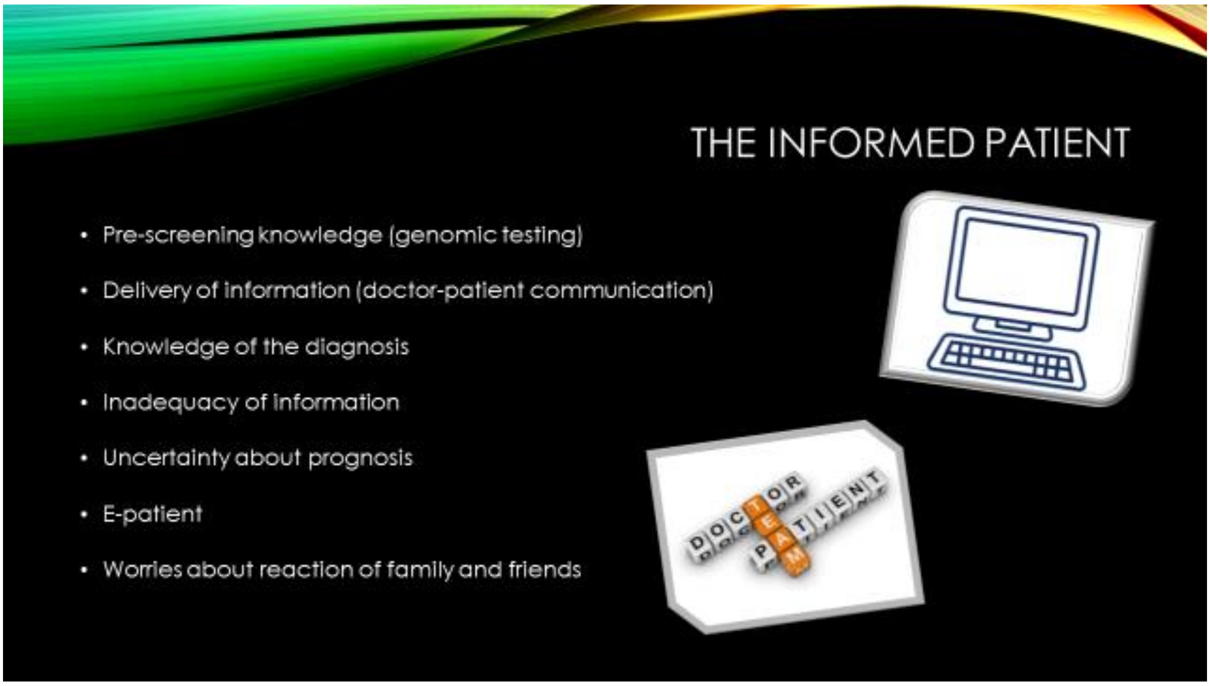
- Cure, death or remission (either with or without relapse)
- Uncertainty = stress
- Psychological response to stress
  - The diagnosis of a major medical illness is considered a severe life stressor and is associated with high rates of depression (Cassem 1995)
  - A meta-analysis found that 24% of cancer patients are diagnosed with major depression (McDaniel et al., 1995)
- Biological response to stress
  - Fight or flight



THE PATIENT (CONT.)

Life with Cancer:

- Difficult symptoms: nausea, fatigue, diet related issues (chemosensory alteration – taste, smell, difficulty swallowing etc)
- Pain
- Desire for patient support group
- Self-management support
- Survivor guilt – for patients in remission



THE INFORMED PATIENT

- Pre-screening knowledge (genomic testing)
- Delivery of information (doctor-patient communication)
- Knowledge of the diagnosis
- Inadequacy of information
- Uncertainty about prognosis
- E-patient
- Worries about reaction of family and friends

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THANK YOU FOR LISTENING!
ANY QUESTIONS PLEASE?

Appendix 3

Feedback Form

Lecture: Impact of Screening

Module: Behavioural Medicine, HYM003

Date: Thursday 24th November 2016

How clearly were the lecture aims and objectives set out to you? (Please tick)

1. Very clear 80%	2. Fairly clear 20%	3. Not sure -	4. Fairly unclear -	5. Very unclear -

How much did you feel you knew about the subject before the lecture?

1. A great deal -	2. A fair amount 20%	3. Not sure -	4. Not much 70%	5. Nothing at all 10%

How much do you feel that the lecture improved your knowledge in this area?

1. A great deal 60%	2. A fair amount 40%	3. Not sure -	4. Not much -	5. Nothing at all -

What aspects of the lecture did you find most useful?

Overall, attendees included responses such as: *the group tasks*; *the videos*; *the psychological aspects of treatment and care*; *the discussed case studies*; *understanding how screening process works for the UK.*

What aspects did you find the least useful and/or how do you think the lecture could be improved?

Overall, attendees included responses such as: *more case studies*; *some information was repetitive*; *tasks could be improved*; *the epidemiology slides were too small to see*.

Thank you!

Appendix 4

Observer's Report

Teaching and training competency

MSc Health Psychology/Psychology and Health

HYM003 Behavioural Medicine Module 2016-17

Lecture title: Impact of screening

Date: 24/11/2016

Lecturer: Anastasios Toumpanakis

Observer: Module leader and DPsych director

Observer's report

Anastasios delivered a very informative lecture on different types of screenings in cancer. He has prepared the teaching plan and provided a reading list for the students well in advance of his teaching. The session was interactive, but Anastasios could have assessed students' understanding more regularly throughout the lecture. Anastasios set clear objectives of the lecture and gave very detailed information on each screening he was presenting accompanying his slides with videos to illustrate medical procedures. Anastasios was able to talk around his slides well and answered student questions well. More up-to-date theories and research evidence could have been discussed. The findings of the 2008 systematic review are somewhat outdated now. Further, the theory of planned behaviour after recent criticisms is not used as much and researchers rely more on the theoretical domain framework to design interventions. A couple of minor points: the letter font of the slides were too small and difficult to read against the black background, and some points were a bit repetitive. Overall, it was a well-prepared lecture and students gave a very positive feedback.

Unit 4: Teaching and training

Case study 3:

An introduction to psychological therapies; teaching for the medical students of Imperial College London at West London Mental Health National Health Service Trust

INTRODUCTION

Imperial College London's medical students complete a part of their undergraduate training at the WLMHT. The training involves on-site lectures in a number of subjects. For example, psychiatry, psychology, and counselling. The Clinical Psychologist and colleague of mine, who was taking part in the training and tutorial programme, asked me whether I would be interested in delivering a series of lectures in a teaching subject regarding the role of psychological therapies in the NHS to medical students. I was enthused to have received such an offer and agreed as I sought the opportunity to improve my teaching skills within a subject that I felt confident in. The confidence I felt derived from the professional experience I have gained within the last four years of working in the psychology department of WLMHT.

PLANNING, DELIVERY, AND EVALUATION

Following my acceptance, a meeting was arranged between the Clinical Psychologist and myself in order for me to receive further details and information regarding the teaching procedure. I found it to be a challenging experience to be in a place of teaching medical students a subject which I was already familiarised with. It would be the first time I would be delivering a lecture to medical students. The Clinical Psychologist informed me that the students' knowledge about psychological therapy approaches within the NHS was very basic. Taking that on board, we agreed that the teaching would mainly be an introduction to psychological therapies focussing on the main psychological approaches that are available through the NHS. I deemed it important to emphasise and make clear what exactly is the role of a psychologist within the NHS, and the number of different psychologist's specialisations (e.g. clinical, health, forensic, counselling). The time frame for this lecture was set to one hour and was already pre-determined by the WLMHT. The lecture took place at the Research and Development building on the hospital site.

From my professional experience I was aware that the psychological therapies offered by the NHS are not very well-known neither to medical students, nor to any other professional groups or members of staff (e.g. nurses, social workers, occupational therapists). For this reason, I wanted my teaching material to tackle this issue and promote awareness. The learning objectives were therefore set to raise awareness of a psychologists' role within the NHS services, raise awareness of the range of different psychological therapies available, and of the range of conditions which might benefit from a referral for psychological evaluation and therapy.

My approach in this series of lectures was a semi-structured and interactive teaching method as this is an effective and appropriate method to engage participants. Lumpkin, Achen and Dodd (2015) suggest that a collaborative and interactive teaching method is an effective way of learning and allows individuals to engage. My primary aim was to deliver a teaching lecture which participants could refer to as part of their work as healthcare professionals. Being a student implies that you attend many lectures during your studies and for that reason I sought to make the lecture as interactive and engaging as possible. I started by inviting them to consider what they think the role of a psychologist is within the NHS. The logic behind that was that I wanted to get an understanding of how they perceived the role of a psychologist within the NHS in order to proceed accordingly. What followed that was a discussion which provided students with a clear image of exactly what a psychologist has to offer with the NHS services.

At present, the main evidence-based psychological approach that the NHS services incorporate is CBT (NICE, 2009a; 2009b; 2009c; 2011a; 2011b; 2013a; 2013b; 2014a; 2014b; 2016a; 2016b), and that was why I decided to put CBT in the spotlight of this presentation (please see Appendix 1). I tried to engage the students by asking them questions and reassuring them that there was no right or wrong answer. My goal was to guide them to implement a psychological perspective when dealing with a service user rather than a medical perspective. Throughout the presentation I referred to case studies that I have come across in order to maintain their interest with references to real-life situations. In addition, I planned a brief role-play (please see Appendix 2) which aimed at helping students get a clearer understanding of the CBT model and its characteristics. As verbal feedback revealed, students were particularly interested in which types of population could be fit for psychological referral. In this section I underlined the importance of the informed service user's choice for psychological intervention, any possible side-effects, and the readiness for a service user to be referred to psychological services (e.g. the more acute the state of the service user the less likely for the psychological intervention to be effective).

At the end of the presentation I answered all the questions of the medical students and gave them feedback forms (please see Appendix 3) to fill in in order to evaluate the presentation. The feedback received suggested that the students found the teaching beneficial, interesting and well-delivered. The verbal feedback I received indicated that the presentation was engaging and students did not find it to be tiring in any way. After the presentation I received a letter (please see Appendix 4) from the Deputy Director of Clinical Studies at WLMHT and Senior Lecturer at Imperial College. In his letter the Deputy Director thanked me for the delivery of the presentation and the positive impact it had on the students. This also suggested that the delivery of the teaching was a success. Moreover, I considered this to be an opportunity to create and develop links with other healthcare professionals which could prove to be beneficial in the future. I continued to deliver the same subject lecture once per month for the next ten months. While delivering the lectures I also built on my teaching style as my aim was to avoid long monologues and get the students involved. I feel that I managed to evolve in this role as I took the given feedback very seriously and I was incorporating students' suggestions from each and every lecture, e.g. extra role-play scenarios. These ten months have aided in my teaching development and my presentation skills as well as my ability to reflect on and implement given feedback to update and enrich my lectures.

REFLECTION

When the Clinical Psychologist approached me to discuss the potential delivery of the presentation I was enthused as I had never had the opportunity to deliver a teaching presentation for medical students. It was challenging for me because I aimed at delivering a clear and informative introductory presentation about a subject that my professional experience allows me to feel familiar with. Such a presentation required that I assessed participants' academic needs and build a high-quality, engaging and interactive presentation around those needs. I have high hopes that they will indeed take into consideration and put into practice a more psychological perspective as medical professionals. My hopes were reinforced when the students stated that they would like to have further training in psychological approaches in order to implement them as part of their work. As a trainee health psychologist, I considered this to be a great opportunity to improve my teaching skills. It was of utmost importance to me to be able to share the professional (and personal) knowledge, experience and skills I have acquired as a trainee health psychologist to medical students. I do believe that this experience has added more tools for them to be able to incorporate in their practice. Overall, this was a very positive experience for me as part of my training as a health psychologist, and in creating links with other health professionals.

FUTURE TEACHING SKILLS AND STYLES THAT I NEED TO DEVELOP

Reflecting retrospectively on my teaching of medical students at Imperial College London, several aspects could inform my future teaching deliveries. An aspect of consideration for the future teaching of a similar group would be the employed teaching style. The Grasha–Riechmann is a popular model that integrates teaching and learning styles, and demonstrates the stylistic qualities of teachers and students and how they can enhance the quality and nature of the learning experience (Ford II, Robinson & Wise, 2016). Teaching styles vary as they are based on the group of students, the taught subject, the classroom setting and the personal characteristics of the teacher. The Grasha–Riechmann model defines five teaching styles: expert, formal authority, personal model (or hybrid), facilitator and delegator (Ford II et al., 2016; Grasha, 1994).

The formal authority style offers clear expectations and learning goals; however, it lacks in interaction and engagement. The feedback from the delivered lectures called for additional interactivity; thus, this style would probably not be adaptable for medical students. The expert approach requires a high level of expertise in the taught subject and challenges students with information; it would, therefore, be more appropriate for a seasoned professional. I do not feel that this approach is suitable for me as I am still building my teaching confidence and skills. In the delegator approach, the teacher adopts an observant role and is available as a resource to students as they function independently on projects or as part of small groups. In my case, I could not have been a delegator as I was unaware of the students' readiness for independent work or of their familiarity with the subject. In the personal style, the teacher uses personal examples, guides students by showing them how to do things and encourages them to observe and follow the teacher’s approach. Although this style provides direct observation, it demands a good level of relationship between the student and educator. As this was a series of one-off lectures, I would not have been able to establish the necessary level of relationship in order to adopt the personal style approach. Finally, the facilitator approach encourages students to develop problem-solving skills and criteria to make informed decisions and promotes student needs and goals. Medical students attended lectures with broad specialised knowledge and had been trained specifically to be able to problem-solve situations (Chonkar et al., 2018; Kiesewetter et al., 2018; Stjernquist & Crang-Svalenius, 2007; Kassab, Al-Shboul, Abu-Hijleh, & Hamdy, 2006). Based on this, I believe that the facilitator style would be the most appropriate for future sessions with medical students as it promotes problem-solving abilities, which could support students to develop a deeper understanding of psychology.

Seeking feedback from medical students before and after the lecture would allow me to reflect on my teaching effectiveness and on how I could adjust and develop it. In hindsight, I believe that the feedback forms I designed should have been more detailed and I acknowledge the room for improvement in every aspect, in particular on the ‘relevance to your learning’ and ‘clarity of presentation’ questions. The feedback received indicated that 41% of students did not find the lecture highly relevant to their learning, 40% did not find the presentation very clear and 12% scored it as average. How could I interpret this feedback in order to better inform, design and deliver future lectures? The feedback suggested that a number of students had difficulties associating the lecture’s content with their medical learning. The forms I used were missing the option for students to make further recommendations, which are important to plan and design future lectures based on student needs. For example, open-ended questions (such as ‘What was missing from this presentation?’, ‘Outline three things that you will take away from this lecture.’, ‘What did you like about this lecture?’, ‘What did you think of the lecture’s length?’ and ‘What could be improved to better support your learning?’) would help me identify elements that I had not thought about and enrich future lectures with aspects recommended by the students themselves. Furthermore, although the majority of the students gave a high score for presentation clarity, a considerable percentage (40%) felt that it was not clear enough. Open-ended questions could have identified students’ specific needs regarding course clarity and presentation, allowing me to revise future lectures based on their suggestions. Using a simple 5-point Likert scale does not offer much qualitative information; therefore, I need to include open-ended questions in future evaluation forms to better inform, plan and tailor my lectures to the needs and recommendations of the students. Feedback also revealed that students found the role-play useful and informative, and that they enjoyed the interactive aspect of the lectures. Reinforcing the interaction element in future courses by, for example, giving students tasks to do in groups (e.g. role-plays in small groups, pair discussions) could promote independent thinking and exploration (Tanner, 2013). Furthermore, students reported that the interactive lectures kept them attentive, interested and motivated, and that they were able to assimilate new information faster (Roopa, Geetha, Rani, & Chacko, 2013; Moravec, Williams, Aguilar-Roca, & O'Dowd, 2010).

This was the first time in my career that I delivered a series of lectures. At times I felt overwhelmed, which resulted in me adopting a quiet voice and a fast rate of speech, which could have affected the overall clarity of the course. Student feedback highlighted the need for me to work on my communication skills (including pronunciation, diction, rate of speech and tone of voice) as effective lecture deliveries require more than just language (Singh et al., 2013; Peyre, Thordndike, & Breen, 2011; Rider & Keefer, 2006). There are several communication skills workshops or online courses that I could attend to improve my communication skills, be more effective and promote clarity in future lectures.

A further element that was absent from these lectures was pre-lecture evaluation forms. I was unable to check whether students' expectations had been addressed during the lectures as these were not accurately assessed. Using a more comprehensive evaluation format, such as pre- and post-lecture feedback forms, in future lectures would clarify more effectively the expectations and needs of students. For example, pre-lecture forms could include items such as 'Which part of the course do you think will be particularly valuable for you?', 'What do you hope to learn from this course?' and 'How confident do you feel about your knowledge of today's topic?', which would illustrate how students initially perceived the course and what they had expected from it. In future courses, I will develop an evaluation plan to collect both pre- and post-lecture feedback as I now acknowledge this to be an important element of lecture effectiveness (Sandars, 2018; Pem, Bhagwant, & Jeewon, 2016).

Retrospectively, I could have employed Gibbs' Reflective Cycle model after each lecture to learn from both the positive and negative feedback (Gibbs, 1988). This model is a good way to constructively work through repeated experiences – in this case my experience teaching a series of lectures – and consists of six stages applied after each lecture to help effectively plan the next one. These are (1) description of the teaching experience, (2) feelings and thoughts about the teaching experience, (3) evaluation of the teaching experience – both good and bad, (4) analysis to make sense of the situation, (5) conclusion about what I have learnt and what I could have done differently in the lecture and (6) action plan of alternative approaches and appropriate changes for dealing with, and delivering, the next lectures (Paterson & Chapman, 2013; Gibbs, 1988). Gibbs' model could have enhanced my learning skills and helped me to develop higher-level thought processes (Tawanwongsri & Phenwan, 2019). However, Middleton (2017) criticises the model for preventing reflexive and critical approaches by putting the emphasis on feelings and thoughts, and suggests that the examination of feelings can occur in isolation and cloud the true learning that can evolve from the associated thoughts. However, despite the criticisms, Gibbs' model could have helped me reflect on my teaching experience in a more structured and systematic way (Quinton & Smallbone, 2010). During the planning and delivery of these lectures, I did not use a specific reflective model, which was an oversight on my part. I will embrace the use of reflective practice in future teachings as it enhances critical thinking skills and self-awareness, and promotes exploration and recognition of specific personal and professional characteristics that I might need to develop to become more effective in my role as a health psychologist.

In this section, based on the lectures delivered to medical students and the collected feedback, I tried to identify areas for improvement in my lectures and ways I can address identified weaknesses to be more effective in my future teachings. My aim is for future lectures to be guided by what students need as opposed to what I think they need.

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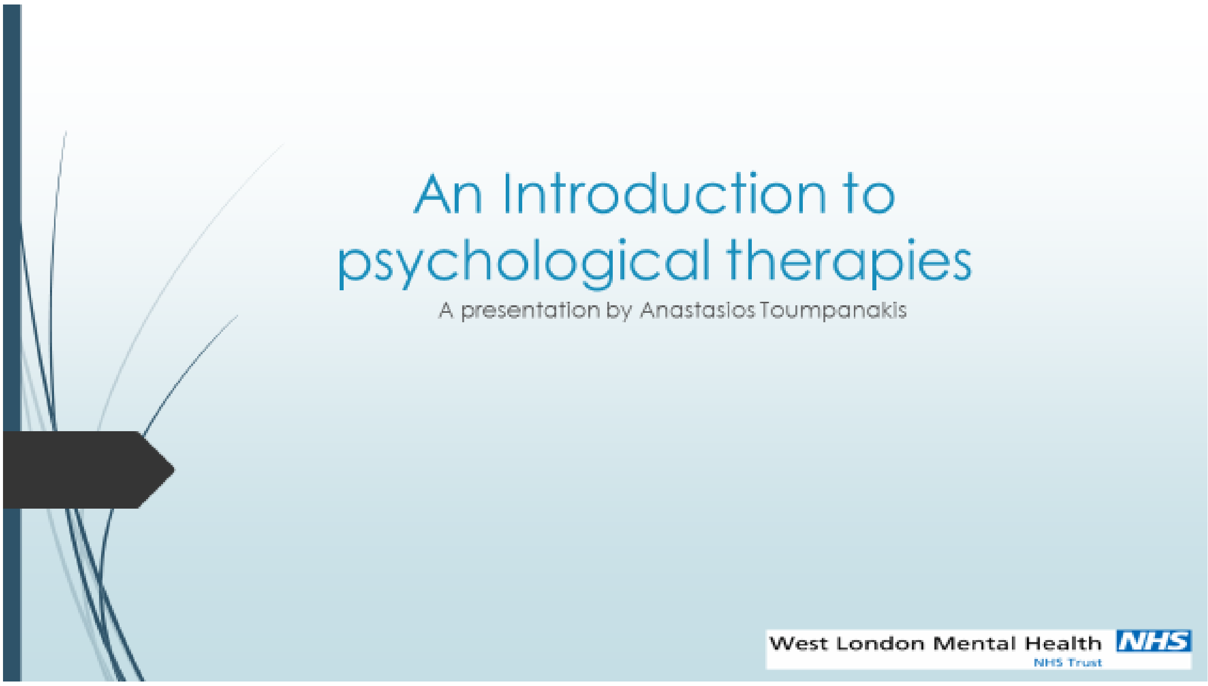
Appendix 1

PowerPoint Presentation



An Introduction to psychological therapies

A presentation by Anastasios Toumpanakis

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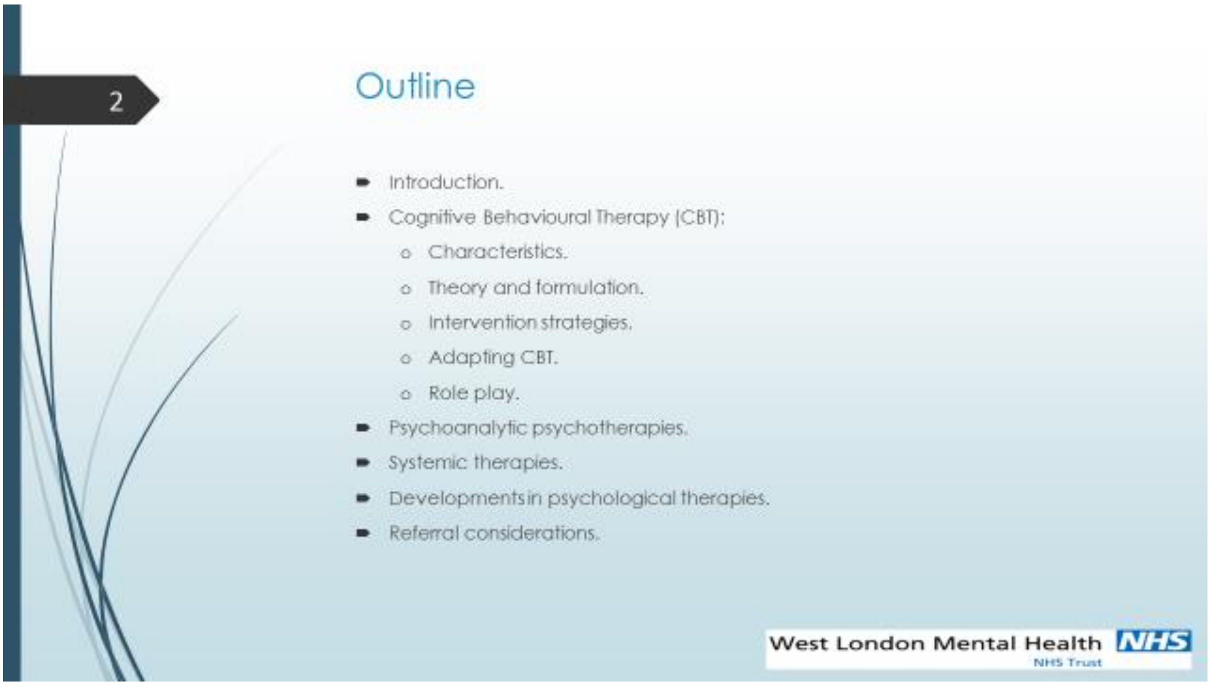

Outline

- Introduction.
- Cognitive Behavioural Therapy (CBT):
  - Characteristics.
  - Theory and formulation.
  - Intervention strategies.
  - Adapting CBT.
  - Role play.
- Psychoanalytic psychotherapies.
- Systemic therapies.
- Developments in psychological therapies.
- Referral considerations.

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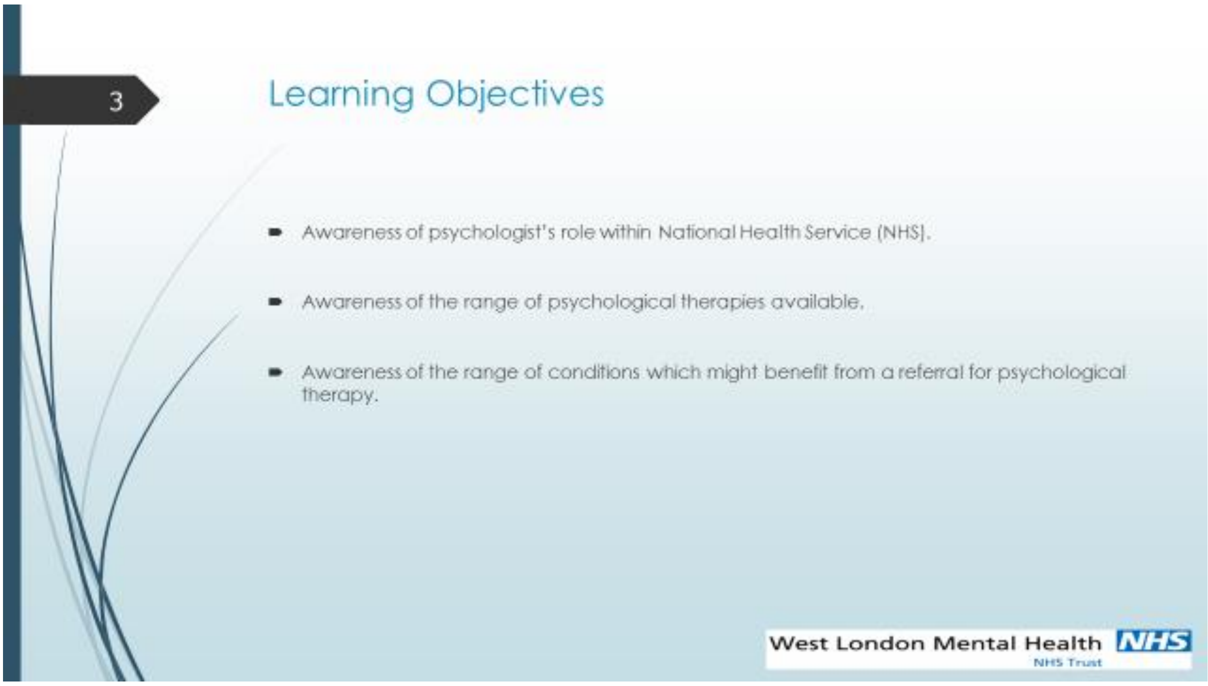
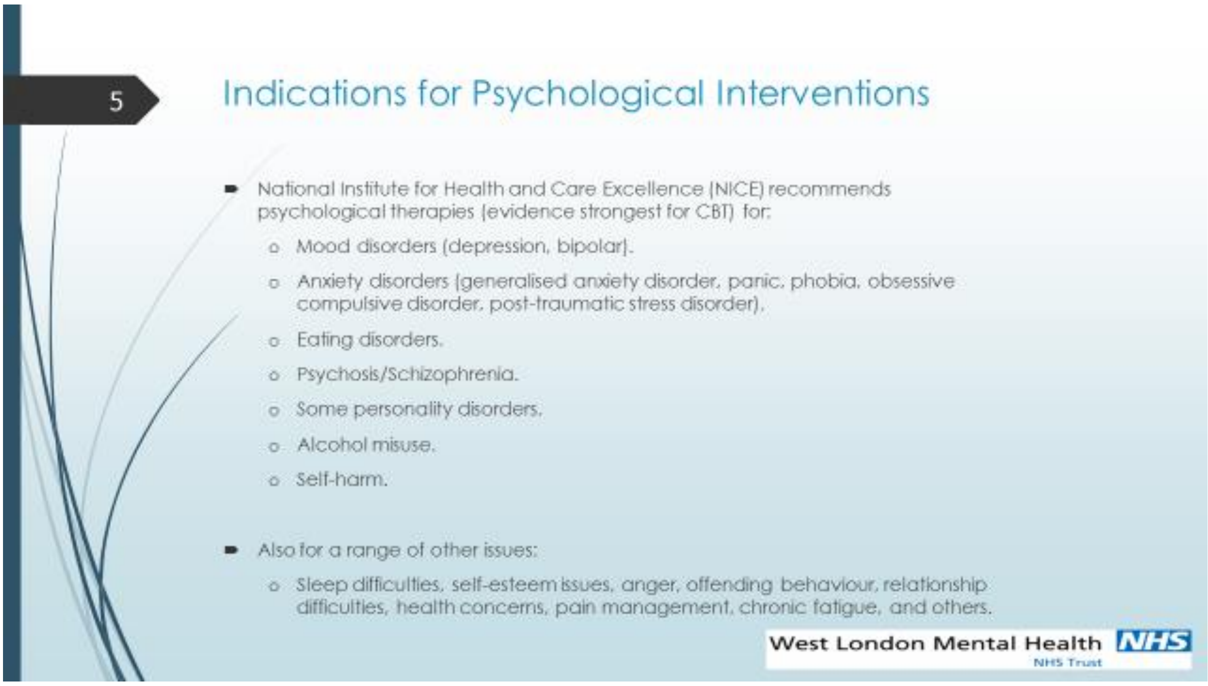


Learning Objectives

- Awareness of psychologist's role within National Health Service (NHS).
- Awareness of the range of psychological therapies available.
- Awareness of the range of conditions which might benefit from a referral for psychological therapy.

Introduction

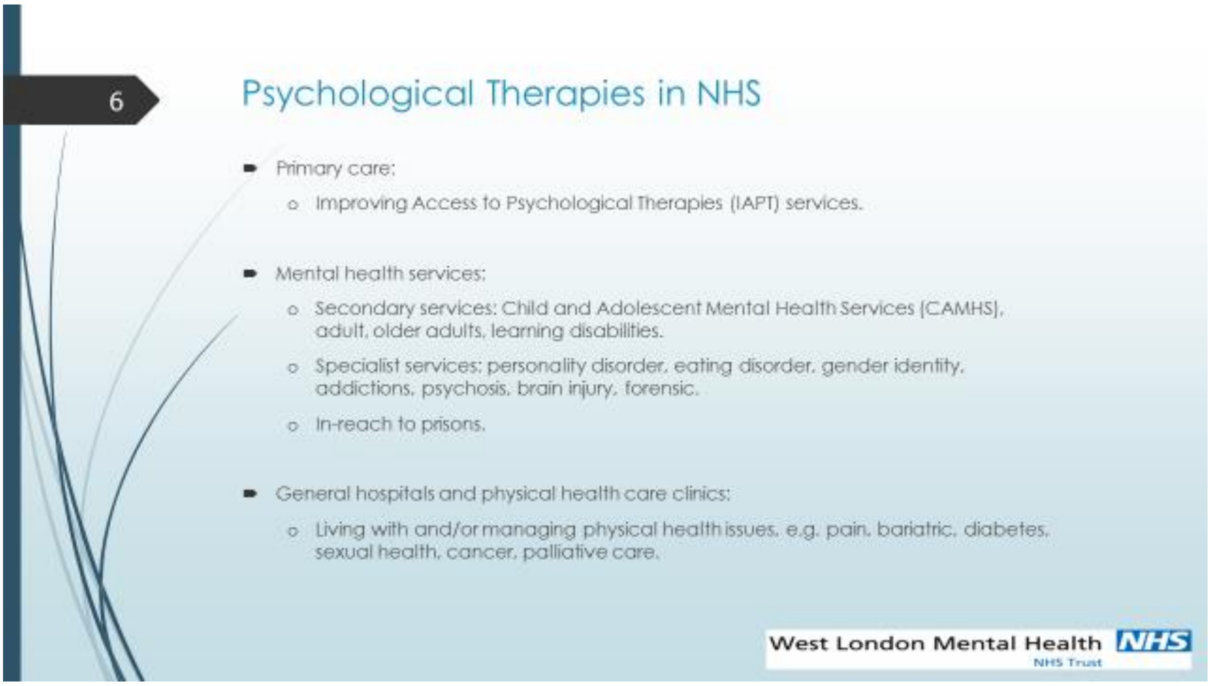
- The aims of psychological therapies are to reduce psychological distress and promote wellbeing.
- Psychological therapies are delivered by a range of professionals who may be trained in one or more theoretical approach or modality, e.g.:
  - Psychologists (clinical, health, counselling, forensic, etc).
  - Specific therapists (trained in one model).
  - Psychological Wellbeing Practitioners (Improving Access to Psychological Therapies - IAPT).
  - Arts therapists (art, drama, music, etc).



Indications for Psychological Interventions

- National Institute for Health and Care Excellence (NICE) recommends psychological therapies (evidence strongest for CBT) for:
    - Mood disorders (depression, bipolar).
    - Anxiety disorders (generalised anxiety disorder, panic, phobia, obsessive compulsive disorder, post-traumatic stress disorder).
    - Eating disorders.
    - Psychosis/Schizophrenia.
    - Some personality disorders.
    - Alcohol misuse.
    - Self-harm.

- Also for a range of other issues:
    - Sleep difficulties, self-esteem issues, anger, offending behaviour, relationship difficulties, health concerns, pain management, chronic fatigue, and others.



Psychological Therapies in NHS

- Primary care:
    - Improving Access to Psychological Therapies (IAPT) services.

- Mental health services:
    - Secondary services: Child and Adolescent Mental Health Services (CAMHS), adult, older adults, learning disabilities.
    - Specialist services: personality disorder, eating disorder, gender identity, addictions, psychosis, brain injury, forensic.
    - In-reach to prisons.

- General hospitals and physical health care clinics:
    - Living with and/or managing physical health issues, e.g. pain, bariatric, diabetes, sexual health, cancer, palliative care.

Psychology in NHS

- Assessment:
  - Mental health, cognitive functioning, developmental disorder, personality disorder, and others.
  - Formulation based on theory.
- Evidence-based interventions:
  - Group or 1-to-1 psychological therapies.
  - Indirect (with carers) or direct (with client).
- Evaluation :
  - Health, clinical, social, occupational outcomes.
- Teaching, training, supervision.
- Consultancy.

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Cognitive Behavioural Therapy

- Talking therapy which helps people connect their feelings with their thoughts and behaviour (NHS, 2016).
- Aims to help people recognise unhelpful/unsupportive patterns in their thoughts or actions which are maintaining their problems (NHS, 2016).
- Support people to develop new practical and helpful coping skills (NHS, 2016).

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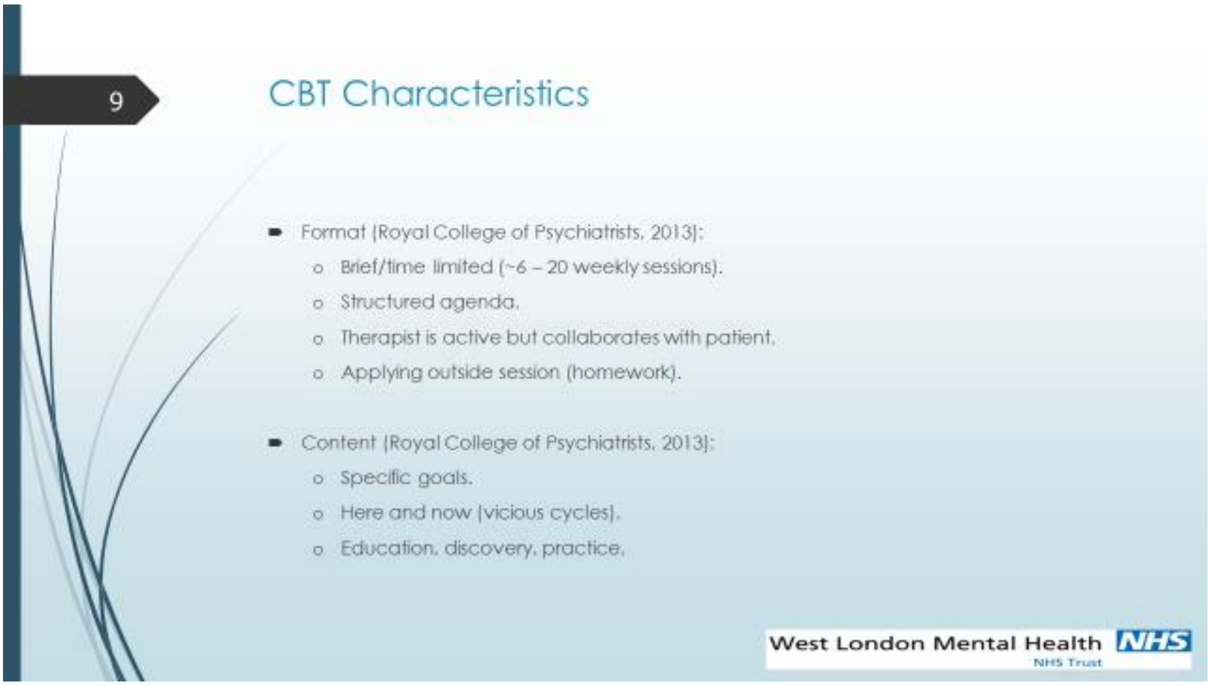

CBT Characteristics

- Format (Royal College of Psychiatrists, 2013):
  - Brief/time limited (~6 – 20 weekly sessions).
  - Structured agenda.
  - Therapist is active but collaborates with patient.
  - Applying outside session (homework).
- Content (Royal College of Psychiatrists, 2013):
  - Specific goals.
  - Here and now (vicious cycles).
  - Education, discovery, practice.

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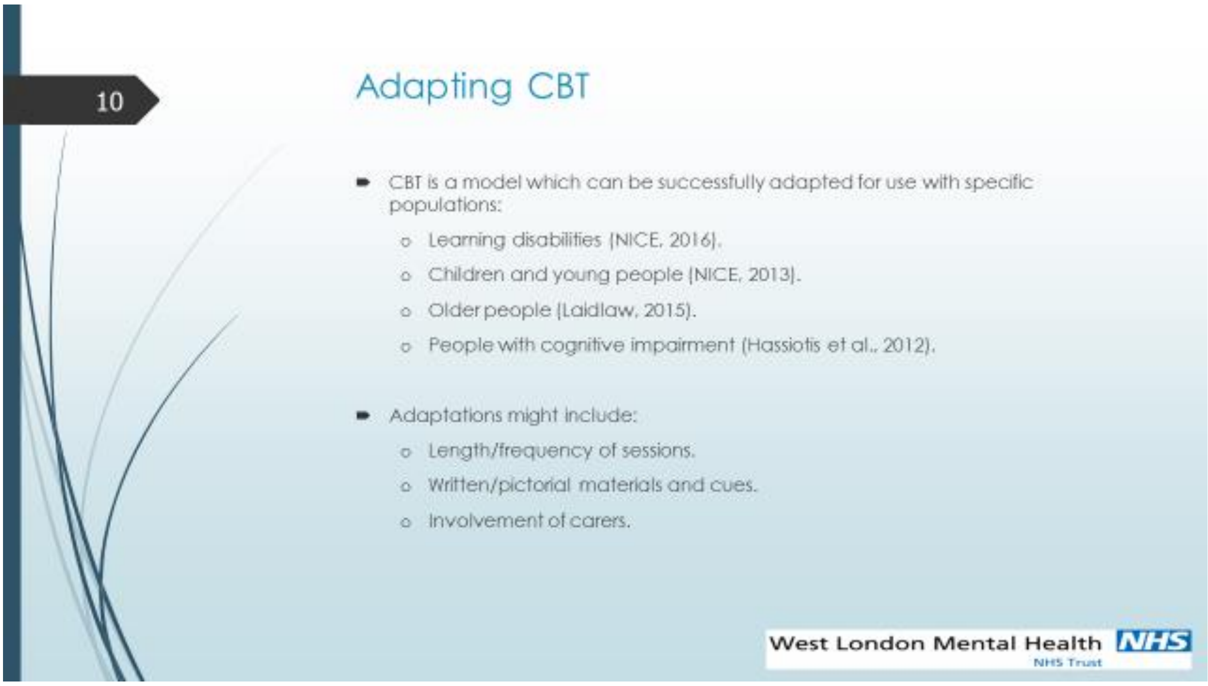

Adapting CBT

- CBT is a model which can be successfully adapted for use with specific populations:
  - Learning disabilities (NICE, 2016).
  - Children and young people (NICE, 2013).
  - Older people (Laidlaw, 2015).
  - People with cognitive impairment (Hassiotis et al., 2012).
- Adaptations might include:
  - Length/frequency of sessions.
  - Written/pictorial materials and cues.
  - Involvement of carers.

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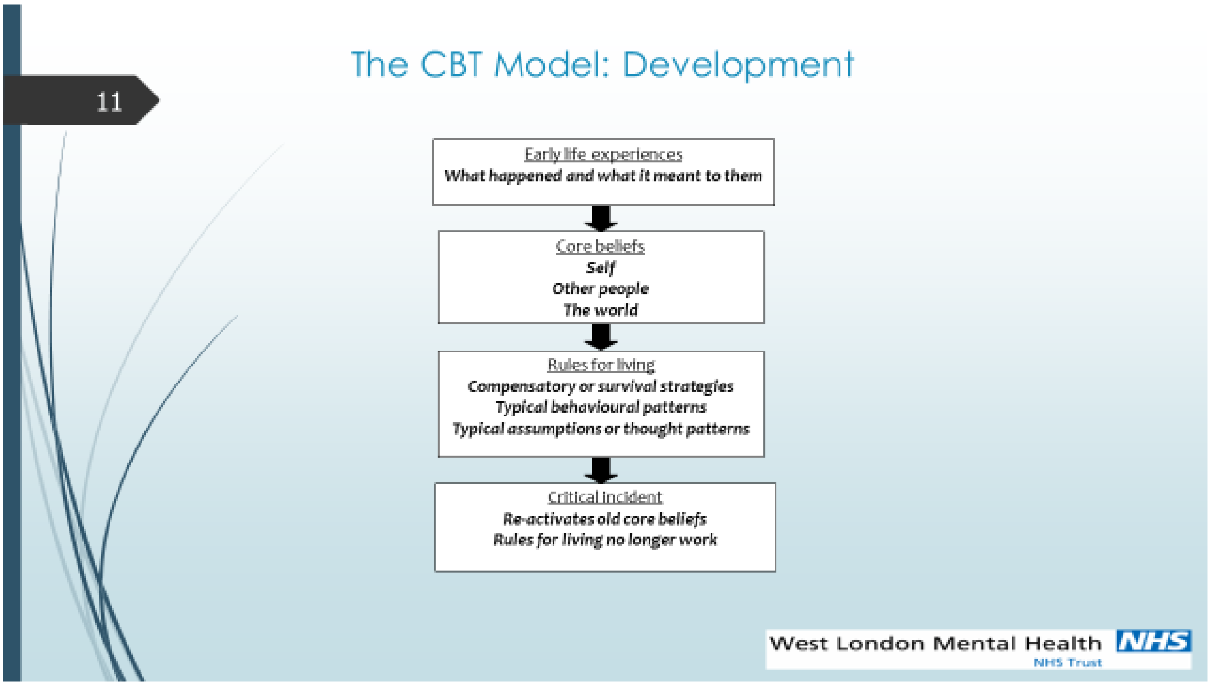

The CBT Model: Development

Early life experiences
What happened and what it meant to them

Core beliefs
Self
Other people
The world

Rules for living
Compensatory or survival strategies
Typical behavioural patterns
Typical assumptions or thought patterns

Critical incident
Re-activates old core beliefs
Rules for living no longer work

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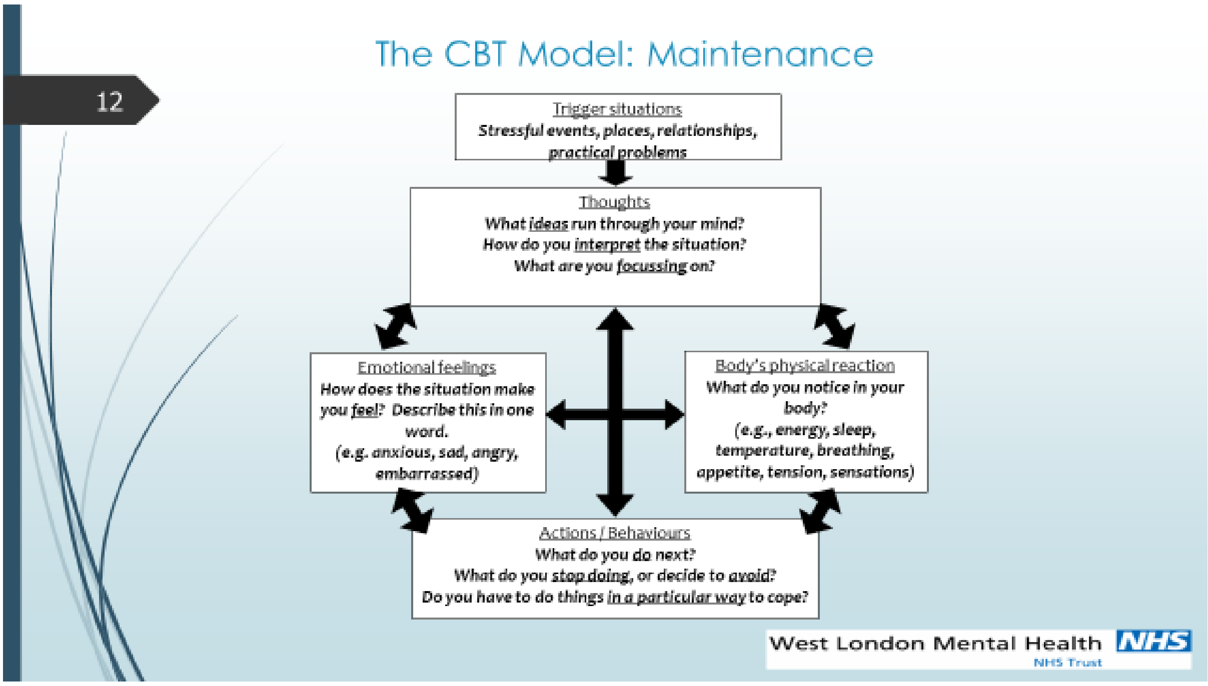

The CBT Model: Maintenance

Trigger situations
Stressful events, places, relationships, practical problems

Thoughts
What ideas run through your mind?
How do you interpret the situation?
What are you focussing on?

Emotional feelings
How does the situation make you feel? Describe this in one word.
(e.g. anxious, sad, angry, embarrassed)

Body's physical reaction
What do you notice in your body?
(e.g., energy, sleep, temperature, breathing, appetite, tension, sensations)

Actions / Behaviours
What do you do next?
What do you stop doing, or decide to avoid?
Do you have to do things in a particular way to cope?

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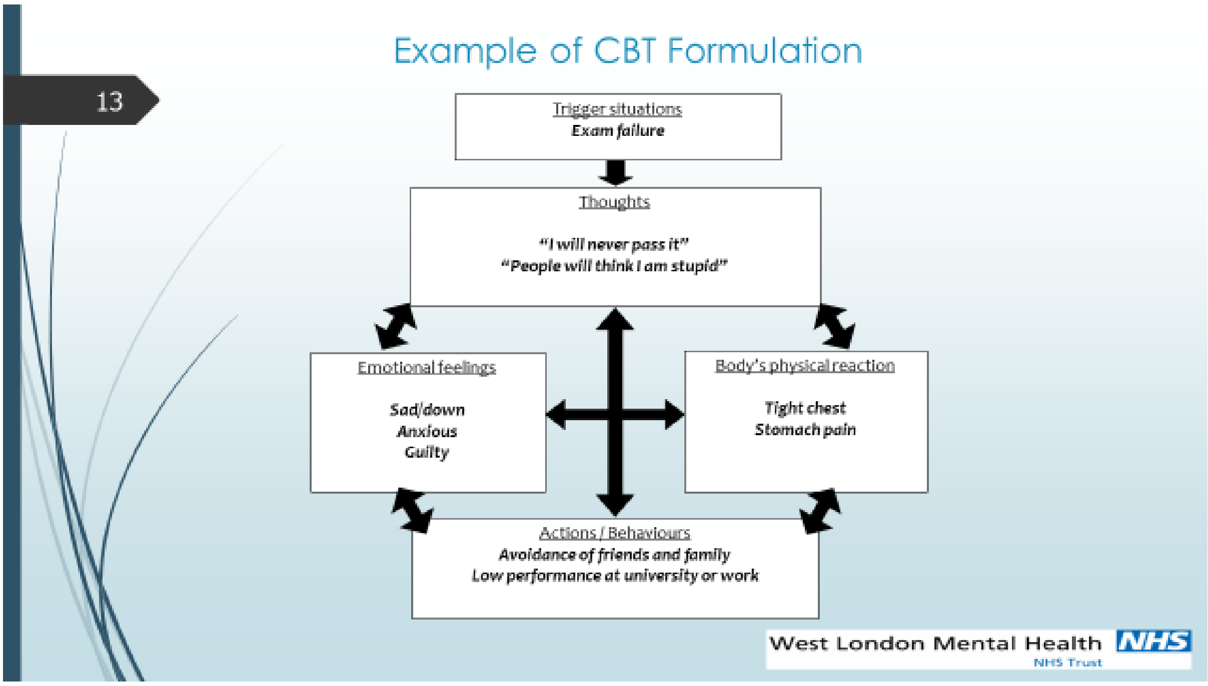


Example of CBT Formulation

Trigger situations
Exam failure

Thoughts
"I will never pass it"
"People will think I am stupid"

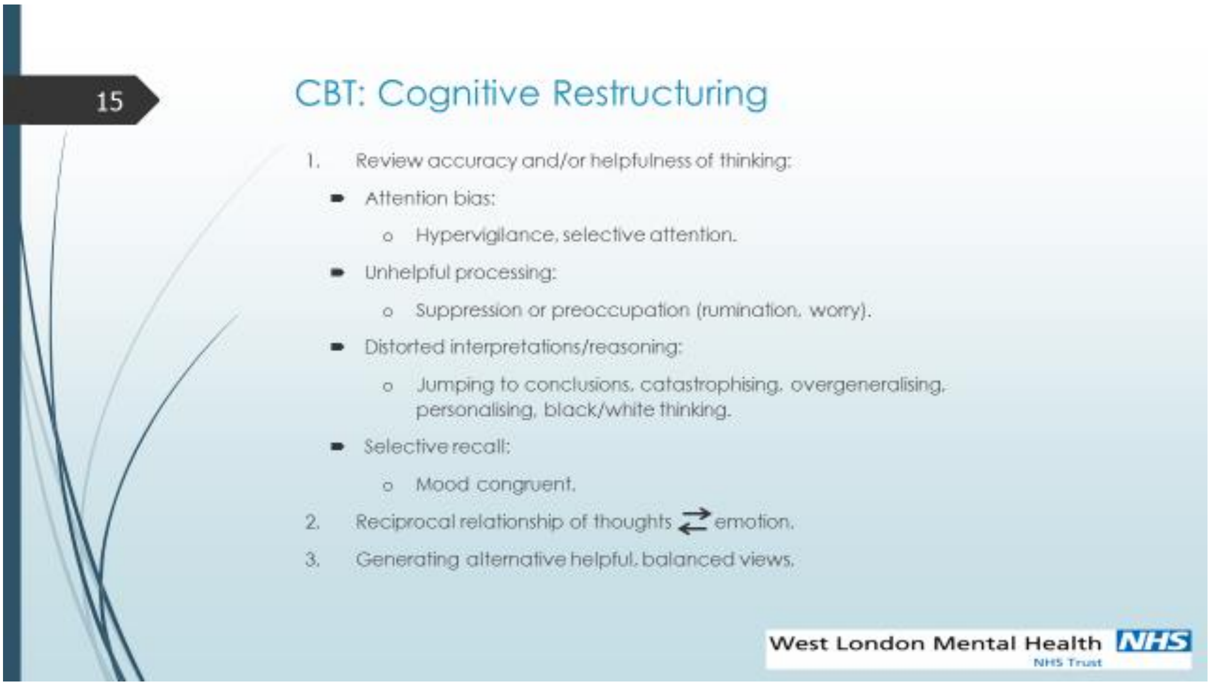
Emotional feelings
Sad/down
Anxious
Guilty

Body's physical reaction
Tight chest
Stomach pain

Actions / Behaviours
Avoidance of friends and family
Low performance at university or work

CBT: Interventions

- Develop formulation and specific goals.
- Targeting maintaining factors.
- Methods include:
    - Psycho-education.
    - Self-monitoring (diary, thought records, forms).
    - Guided discovery and Socratic questioning.
    - Cognitive restructuring.
    - Behavioural experiments.



CBT: Cognitive Restructuring

1. Review accuracy and/or helpfulness of thinking:
   - Attention bias:
     - Hypervigilance, selective attention.
   - Unhelpful processing:
     - Suppression or preoccupation (rumination, worry).
   - Distorted interpretations/reasoning:
     - Jumping to conclusions, catastrophising, overgeneralising, personalising, black/white thinking.
   - Selective recall:
     - Mood congruent.
2. Reciprocal relationship of thoughts ⇄ emotion.
3. Generating alternative helpful, balanced views.

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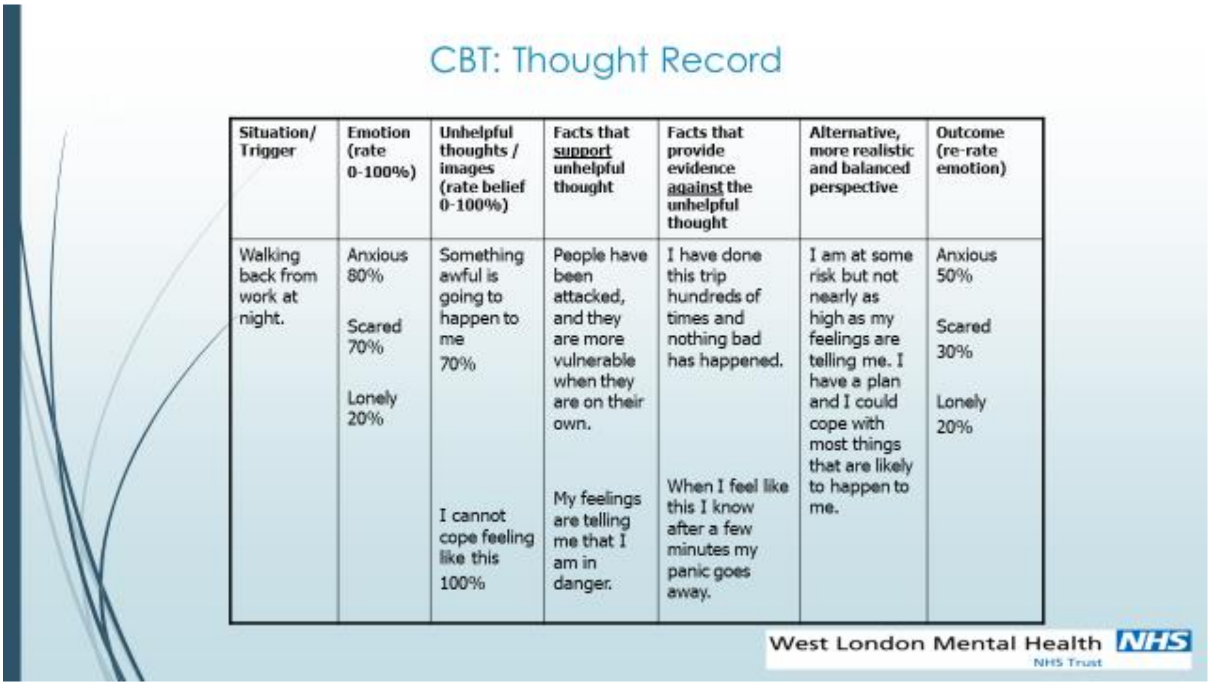

CBT: Thought Record

Situation/ Trigger	**Emotion (rate 0-100%)**	**Unhelpful thoughts / images (rate belief 0-100%)**	**Facts that support unhelpful thought**	**Facts that provide evidence against the unhelpful thought**	**Alternative, more realistic and balanced perspective**	**Outcome (re-rate emotion)**
Walking back from work at night.	Anxious 80% Scared 70% Lonely 20%	Something awful is going to happen to me 70%	People have been attacked, and they are more vulnerable when they are on their own.	I have done this trip hundreds of times and nothing bad has happened.	I am at some risk but not nearly as high as my feelings are telling me. I have a plan and I could cope with most things that are likely to happen to me.	Anxious 50% Scared 30% Lonely 20%
		I cannot cope feeling like this 100%	My feelings are telling me that I am in danger.	When I feel like this I know after a few minutes my panic goes away.		

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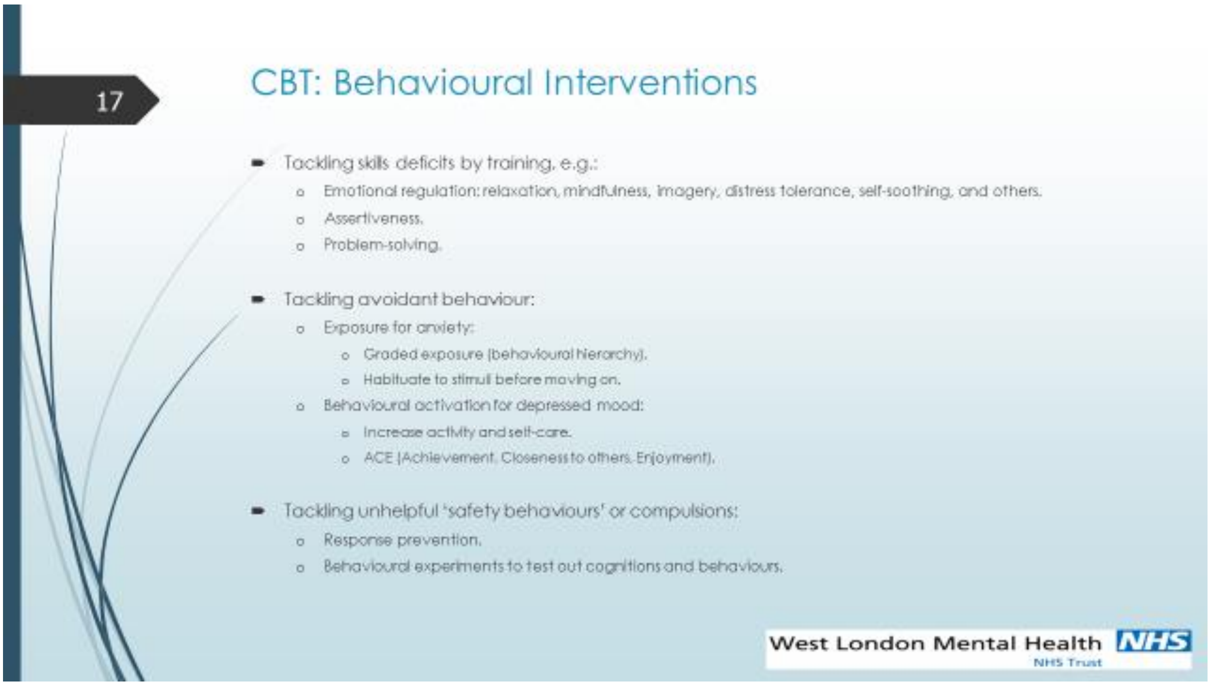
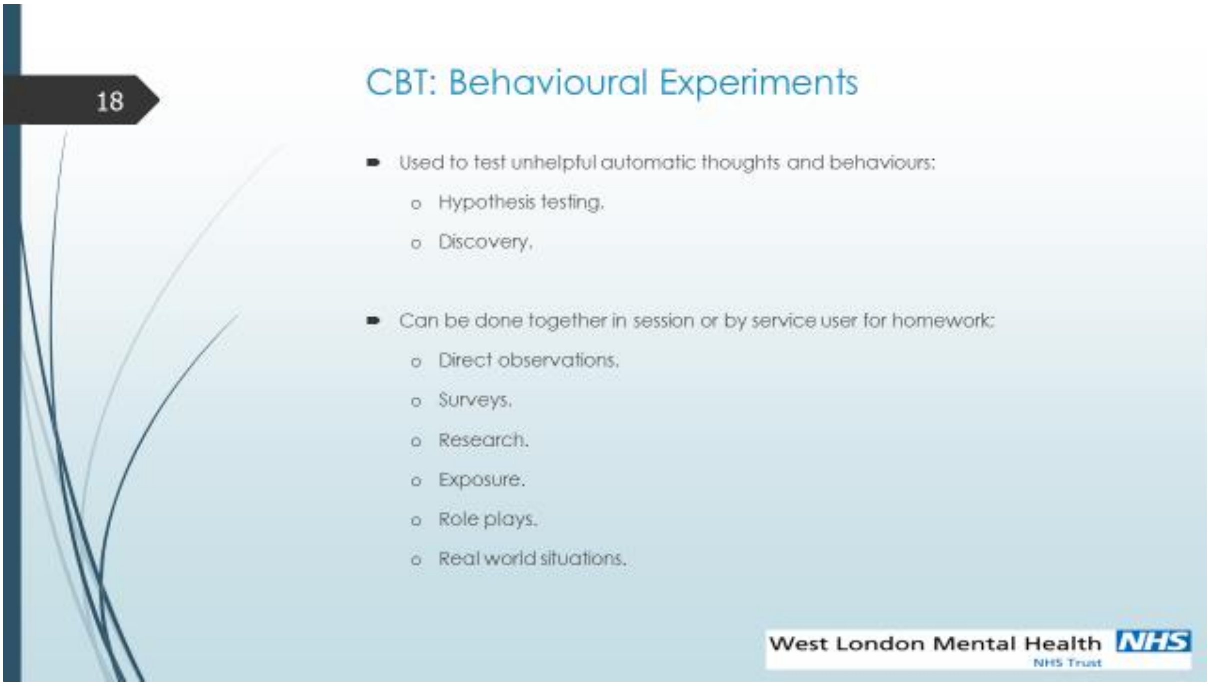


CBT: Behavioural Interventions

- Tackling skills deficits by training, e.g.:
  - Emotional regulation: relaxation, mindfulness, imagery, distress tolerance, self-soothing, and others.
  - Assertiveness.
  - Problem-solving.

- Tackling avoidant behaviour:
  - Exposure for anxiety:
    - Graded exposure (behavioural hierarchy).
    - Habituate to stimuli before moving on.
  - Behavioural activation for depressed mood:
    - Increase activity and self-care.
    - ACE (Achievement, Closeness to others, Enjoyment).

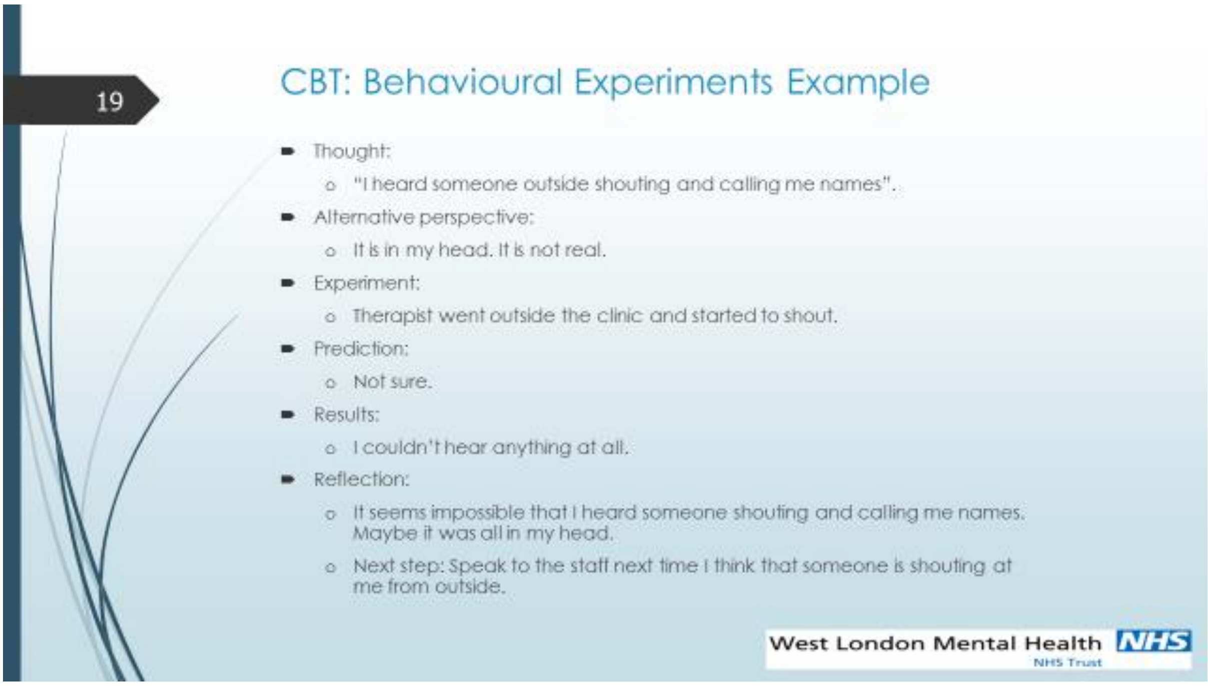
- Tackling unhelpful 'safety behaviours' or compulsions:
  - Response prevention.
  - Behavioural experiments to test out cognitions and behaviours.



CBT: Behavioural Experiments

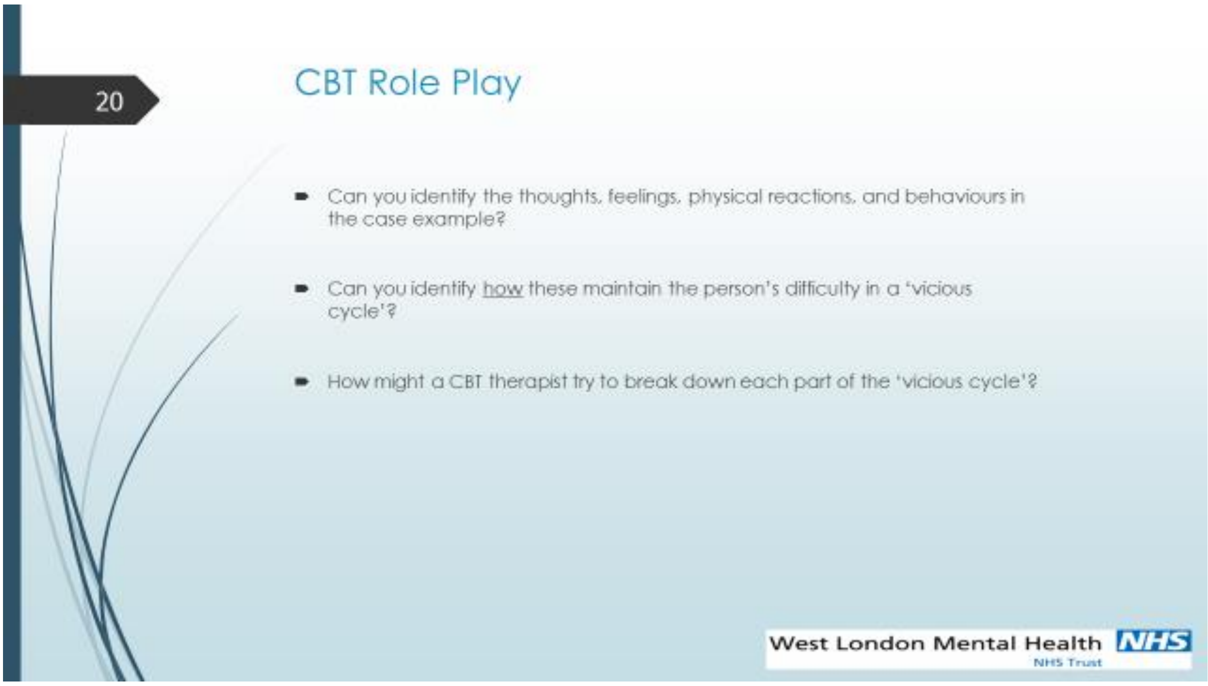
- Used to test unhelpful automatic thoughts and behaviours:
  - Hypothesis testing.
  - Discovery.

- Can be done together in session or by service user for homework:
  - Direct observations.
  - Surveys.
  - Research.
  - Exposure.
  - Role plays.
  - Real world situations.



CBT: Behavioural Experiments Example

- Thought:
  - "I heard someone outside shouting and calling me names".
- Alternative perspective:
  - It is in my head. It is not real.
- Experiment:
  - Therapist went outside the clinic and started to shout.
- Prediction:
  - Not sure.
- Results:
  - I couldn't hear anything at all.
- Reflection:
  - It seems impossible that I heard someone shouting and calling me names. Maybe it was all in my head.
  - Next step: Speak to the staff next time I think that someone is shouting at me from outside.



CBT Role Play

- Can you identify the thoughts, feelings, physical reactions, and behaviours in the case example?
- Can you identify how these maintain the person's difficulty in a 'vicious cycle'?
- How might a CBT therapist try to break down each part of the 'vicious cycle'?

Psychoanalytic Psychotherapies

- Mode (Milton, 2011):
    - Brief (7-40 sessions) or long-term (years) individual (1-5x/week) or group therapy.
- Therapist stance (Milton, 2011):
    - Neutral, non-directive, participant observer (using transference / countertransference).
- Content (Milton, 2011):
    - Exploratory: relating current difficulties to past relationships, unconscious drives, defence mechanisms, developmental conflicts (revealed in free association, dreams, phantasy, parapraxes, and others), to gain insight into repeating patterns in relationships in order to develop new ways of relating.

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Systemic Therapies

- Focus on systems individuals belong to (Skorunka, 2009).
- Family therapy:
    - Most widely used with children and young people (CAMHS, Early Intervention Service - EIS).
    - Characteristics (Skorunka, 2009):
        - Mode: About 10 (6-20) monthly sessions with patient's family, therapists, reflecting team.
        - Content: solution-focused, interactions not individuals.

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Ongoing Developments in Psychological Therapies

- Newer therapies are adopting and integrating a range of Eastern (e.g. mindfulness), psychoanalytic, biological, cognitive, and behavioural approaches.

- '3rd wave' CBT - process of thinking, not just content.
  - Mindfulness-based cognitive therapy (MBCT) – *depression.*
  - Dialectical behaviour therapy (DBT) – *self-harm.*
  - Schema therapy – *personality disorder.*
  - Acceptance and commitment therapy (ACT) – *various.*
  - Compassion-focused therapy (CFT) – *shame.*

- Other popular hybrids:
  - Cognitive Analytic Therapy (CAT) – *personality disorders/relationships.*
  - Mentalisation-Based Treatment (MBT) – *borderline personality disorder.*

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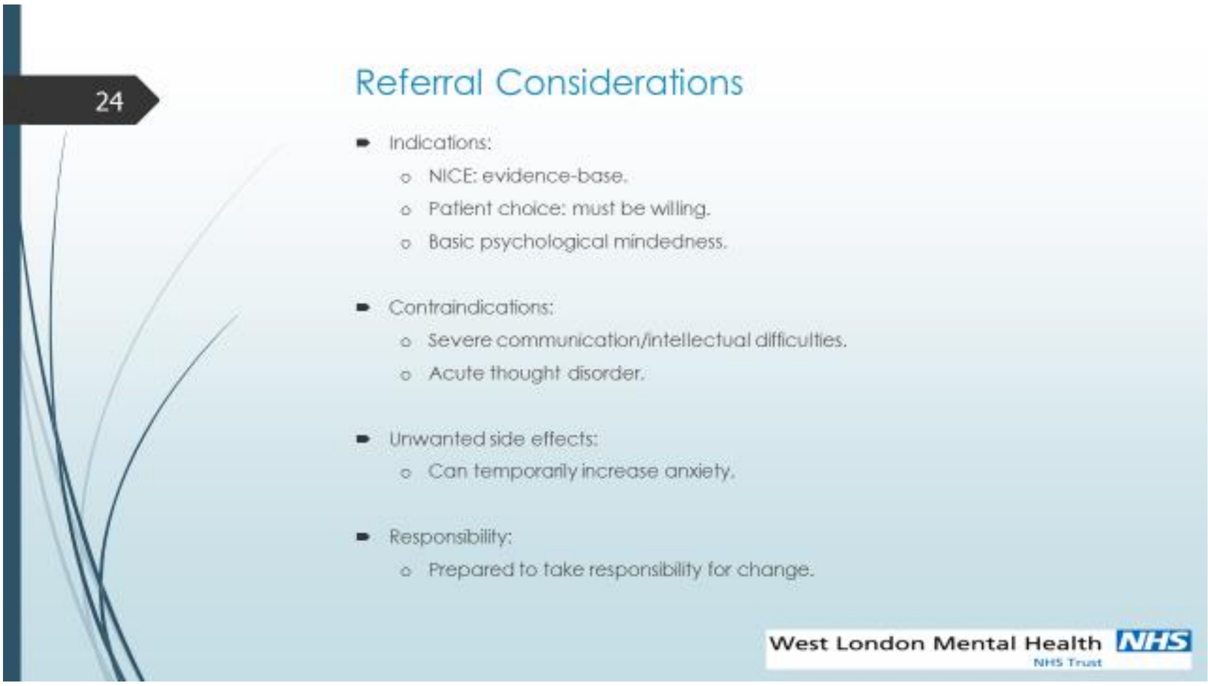

Referral Considerations

- Indications:
  - NICE: evidence-base.
  - Patient choice: must be willing.
  - Basic psychological mindedness.

- Contraindications:
  - Severe communication/intellectual difficulties.
  - Acute thought disorder.

- Unwanted side effects:
  - Can temporarily increase anxiety.

- Responsibility:
  - Prepared to take responsibility for change.

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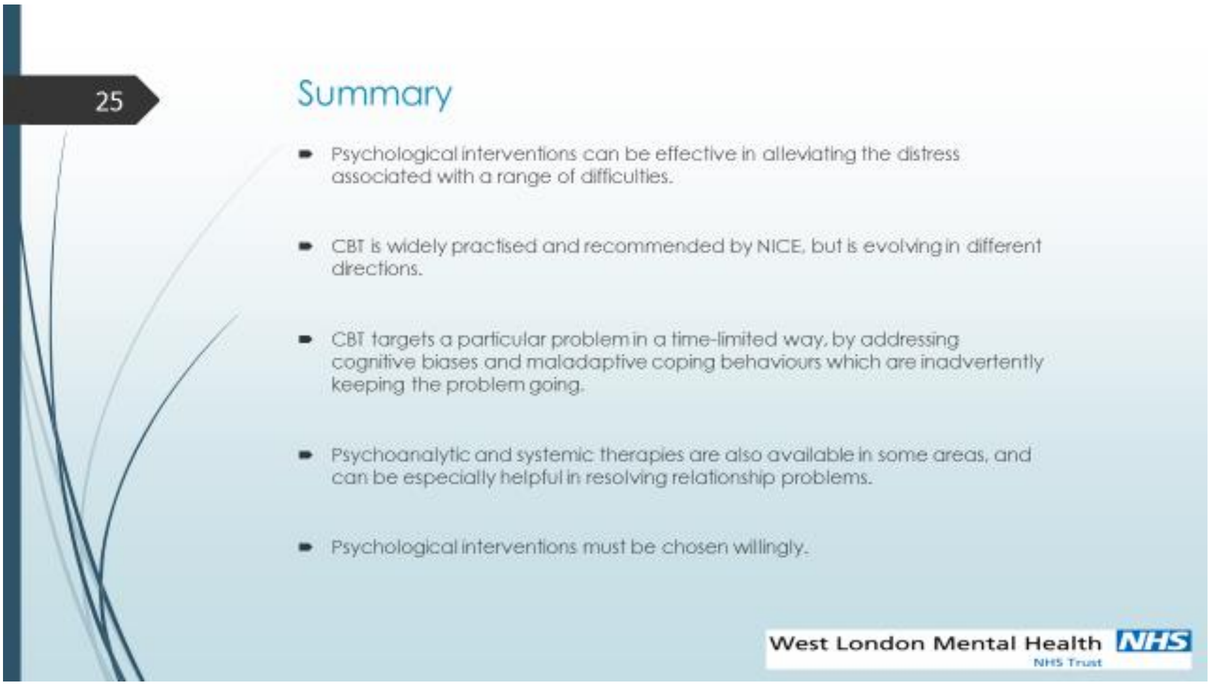

Summary

- Psychological interventions can be effective in alleviating the distress associated with a range of difficulties.
- CBT is widely practised and recommended by NICE, but is evolving in different directions.
- CBT targets a particular problem in a time-limited way, by addressing cognitive biases and maladaptive coping behaviours which are inadvertently keeping the problem going.
- Psychoanalytic and systemic therapies are also available in some areas, and can be especially helpful in resolving relationship problems.
- Psychological interventions must be chosen willingly.

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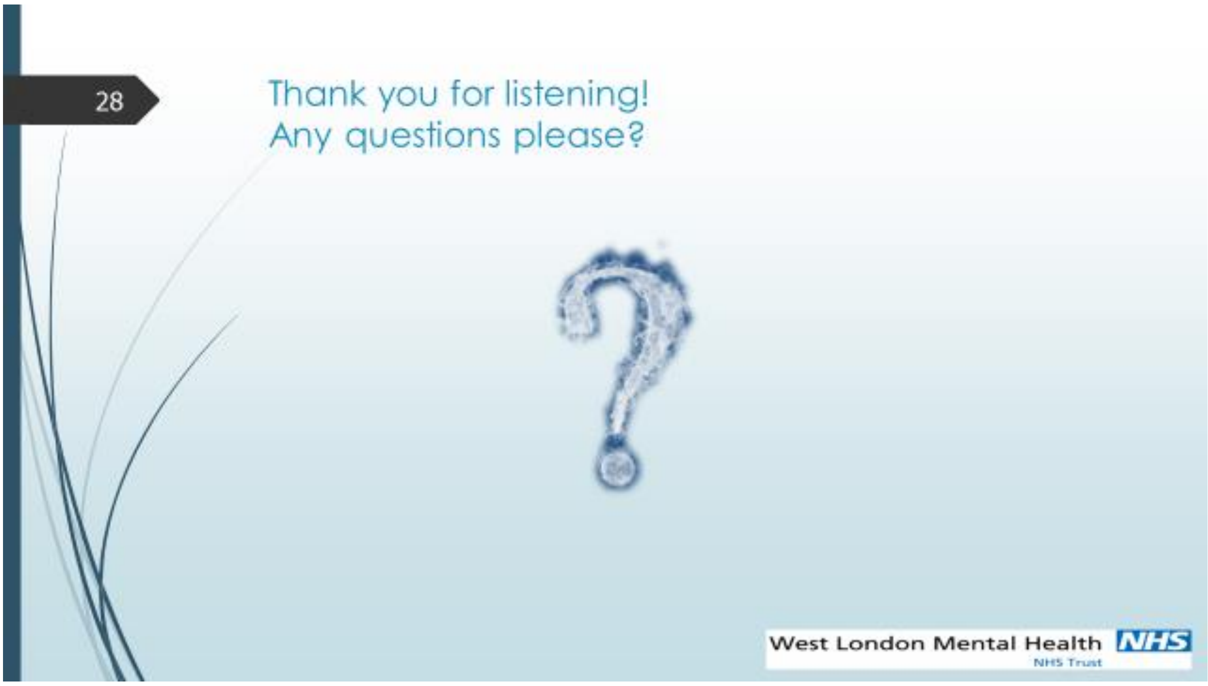

Thank you for listening!
Any questions please?

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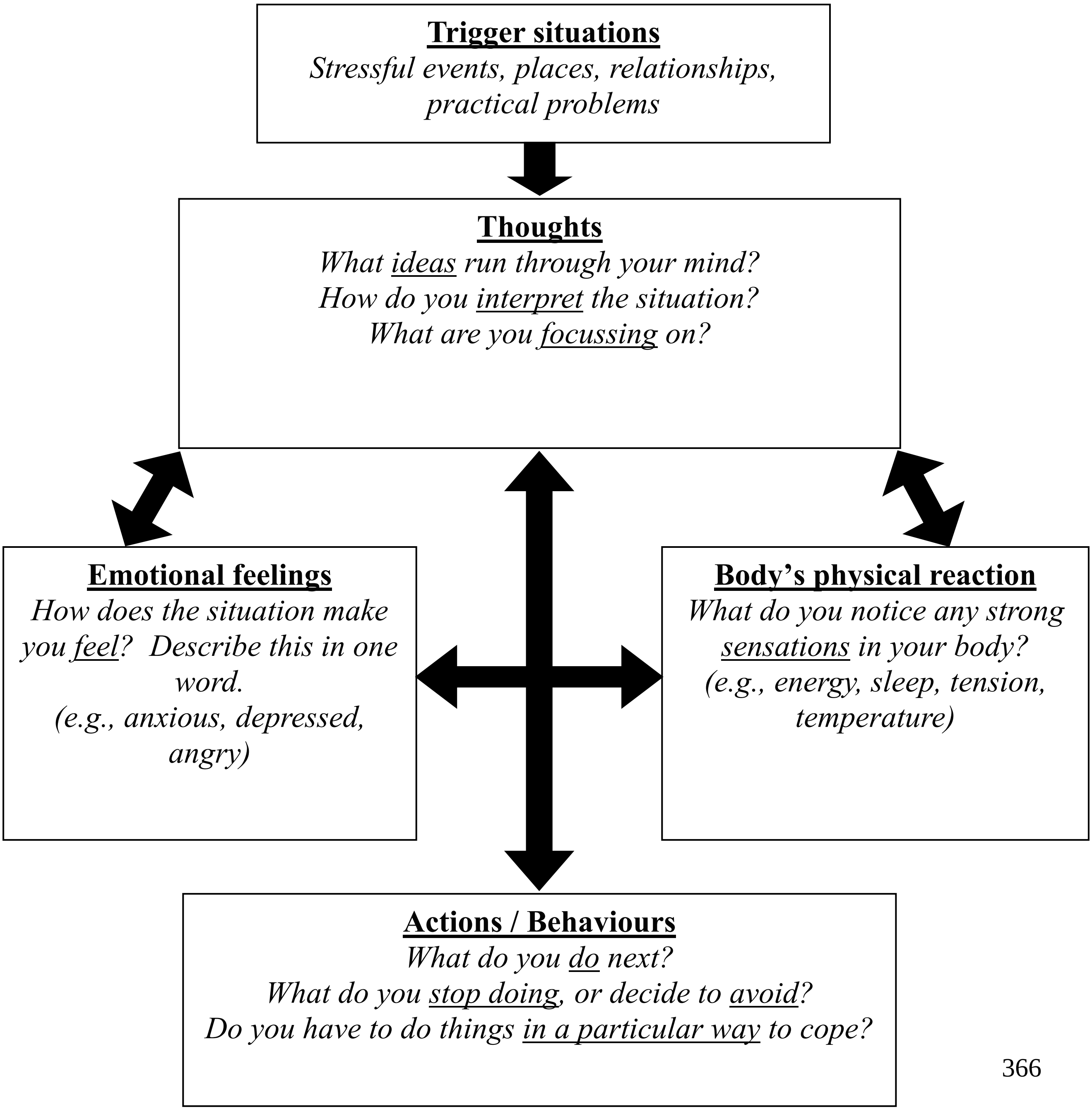
Appendix 2

Role-Play Handout

Introduction to Psychological Interventions
CBT Case Study

Identify the factors which fit into each section and consider how each one may maintain the difficulty this client is facing.

What interventions might a CBT therapist consider for each part of this vicious cycle?



Trigger situations
Stressful events, places, relationships, practical problems

Thoughts
What ideas run through your mind?
How do you interpret the situation?
What are you focussing on?

Emotional feelings
How does the situation make you feel? Describe this in one word.
(e.g., anxious, depressed, angry)

Body's physical reaction
What do you notice any strong sensations in your body?
(e.g., energy, sleep, tension, temperature)

Actions / Behaviours
What do you do next?
What do you stop doing, or decide to avoid?
Do you have to do things in a particular way to cope?

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Appendix 3

Feedback Form

Subject: An introduction to psychological therapies	
Date: Thursday 29th September 2016	**Time:** 14:00
Location: West London Mental Health NHS Trust	

Part I. Please give feedback on how well this session met its objective (indicate your response by circling the number:

	Low **High**				
Relevance of content	1 -	2 -	3 -	4 36%	5 64%
Clarity of presentation	1 -	2 -	3 9%	4 31%	5 60%
Relevance to your learning	1 -	2 -	3 12%	4 29%	5 59%

Part II. Evaluation of session:

a) **What did you learn from the session/workshop that was new?**

Overall, attendees included responses such as: *concept of CBT model and how it works*; *what CBT involves*; *how to use CBT model*.

b) **How can you apply this new information in the future?**

Overall, attendees included responses such as: *will better understand who CBT is appropriate for*; *speaking to patients*; *make sure that patients have coping mechanisms*.

c) **Other comments and suggestions:**

Overall, attendees included responses such as: *liked the role-play*; *role-play was useful*; *very informative and entertaining session*.

Part III. Presenter:

a) How do you rate the presentation?

Low				High
1	2	3	4	5
-	-	-	18%	82%

b) Please rate the knowledge of the speaker?

Not Knowledgeable				Knowledgeable
1	2	3	4	5
-	-	-	-	100%

c) How do you rate the presentation skills of the speaker?

Low				High
1	2	3	4	5
-	-	-	9%	91%

d) Overall rating

Poor	Average	Excellent
1	2	3
-	-	100%

Appendix 4

Evaluation Letter

Imperial College
London

Undergraduate Medicine Teaching - Psychiatry
Undergraduate Medicine Office
Room 3/13, 2nd Floor
The Claybrook Centre

37 Claybrook Road
London W6 8LN

Tel: [redacted] Fax: [redacted]

E-mail: [redacted] or
[redacted] Web page:
http://www3.imperial.ac.uk/

25th October 2016

Dear Mr Anastasios Toumpanakis,

Thank you very much for supporting the recent cohort of Imperial undergraduate medical students at Saint Bernard's Hospital by taking part in teaching and tutorial programme.

We very much value your contribution and time that you gave and hope that you will get involved in the future. Our students benefit significantly from the input given by professionals such as yourself and for that we are very grateful.

Thank you once again.

Kind regards,

Dr [redacted] MB ChB, MRCPsych

Consultant Psychiatrist, West London Mental Health Trust
Hon Senior Lecturer, Imperial College Medical School, London, UK

Deputy Director of Clinical Studies, West London Mental Health Trust

Imperial College of Science, Technology and Medicine

Section E: Systematic review

The effectiveness of plant-based diets in promoting well-being in the management of Type 2 diabetes: a systematic review.

1.0 INTRODUCTION

1.0.1 Diabetes facts

The WHO (2016) estimates that in 2014 422 million adults were living with diabetes globally, while according to the IDF (2015) this number will rise to 642 million by 2040. In the UK the number of people who have diabetes is over 4.5 million (Diabetes UK, 2016), and in the USA it is more than 29 million respectively (Centers for Disease Control and Prevention, 2016; IDF, 2015). Hex, Bartlett, Wright, Taylor, and Varley (2012) report that in the UK in 2010/2011 diabetes costed approximately £10 billion in direct costs and £14 billion in indirect costs, totalling £24 billion (10 per cent of the NHS budget), with the estimation being £40 billion in total in 2035. In the USA the annual economic burden is $245 billion, $176 and $69 billion in direct and indirect costs respectively (American Diabetes Association, 2013).

Diabetes UK (2016) states that the 90 per cent of people with diabetes have T2D, while at the same time the percentage of people with T2D is on the rise and increasing. The increasing levels of obesity in many countries nowadays have underlined a very concerning newly introduced aspect: the number of T2D in children is growing (Centers for Disease Control and Prevention, 2014). The IDF (2015) raises the concern by stating that T2D in children has the potential to become a global public health issue which will lead to serious health outcomes and underlines the need for more research in this aspect of diabetes.

1.0.2 The impact of diabetes

Diabetes can cause a number of health complications if not well managed and treated and has the potential to have a huge impact on people’s physical and mental well-being. The WHO (2016) and the IDF (2015) suggest that diabetes considerably increases the risk of CVD, nephropathy, loss of vision due to diabetic retinopathy and lower extremity amputation. Diabetes (and its health complications) is also associated with an increased risk of mortality in most countries (IDF, 2015; Kirkman et al., 2012). The IDF (2015) estimates the number of people who died from diabetes in 2015 before the age of 60 was approximately 5 million; 14.5 per cent of all-cause mortality globally is attributed to diabetes. The countries with the highest number of people with diabetes are the ones with the highest number of deaths associated with diabetes: People’s Republic of China, Republic of India, Russian Federation and the USA. In

2015 T2D was the seventh leading cause of death in the USA (National Center for Health Services, 2016).

T2D is considered to be one of the most psychologically demanding chronic conditions (Habtewold, Islam, Radie & Tegegne, 2016), and people with diabetes often have poor psychological well-being (Mental Health Network, 2012). Diabetes is often comorbid with depression, which has an impact on its management and control (WHO, 2016). A systematic review (Roy & Lloyd, 2012) shows high rates of comorbidity between diabetes and depression and suggests that depression is three times as common among people with diabetes. The psychological stress associated with the management of diabetes could lead to elevated symptoms of depression (Golden et al., 2008). Depression comorbid with T2D has been associated with poorer glycaemic control and poorer management of the condition (Lloyd, Pambianco & Orchard, 2010; Fisher et al., 2008; Lin et al., 2004).

1.0.3 Diabetes management

In January 2018 the American Association of Clinical Endocrinologists and the American College of Endocrinology released their new guidelines in which they suggest that plant-based diet is the optimal nutrition plan for people with diabetes as it promotes the well-being and the better management of diabetes.

The IDF (2015) reports that the most influential factor for the development of T2D is lifestyle behaviour commonly associated with poor diet (e.g. processed and high fat content foods). The WHO (2016) underlines the importance of achieving a standardised and consistent management approach by promoting interventions that support healthy diets.

There is a large body of research that suggests the association between high meat consumption and T2D (Pan et al., 2013; Micha, Michas & Mozaffarian, 2012; Pan et al., 2011; Aune, Ursin & Veierod, 2009). The EPIC-InterAct study is a large prospective cohort study which explored the role of lifestyle and genetics on the risk of developing T2D in approximately 340,000 adults from eight countries in Europe during a mean period of eleven years (Bendinelli et al., 2013). The results of the EPIC-InterAct study show a high risk of T2D among individuals with high meat consumption, specifically red and processed meat. Moreover, after controlling and managing other risk factors for T2D (e.g. smoking, physical activity, alcohol intake), the association between meat consumption and incidence of T2D remained statistically significant. This suggests the importance of healthy diet behaviour in the management of T2D.

The term *plant-based diet* refers to eating habits that avoid the consumption of most or all animal products and support high consumption of fruits, vegetables, legumes, seeds, whole grains and nuts (McMacken & Shah, 2017). Satija et al. (2016) reviewed three prospective cohort studies of a total sample of 200,727 participants and concluded that a plant-based diet is associated with significantly lower risk of T2D. Tonstad et al. (2013) state that plant-based diets could effectively and substantially decrease diabetes incidents. Furthermore, high consumption of fibre, whole grains, fruits and vegetables is associated with a lower risk of T2D (Kuijsten et al., 2015; Cooper et al., 2012; Ye, Chacko, Chou, Kugizaki & Liu, 2012; Yu et al., 2011). A plant-based diet pattern seems to offer high protection against the development of diabetes as it contains antioxidants, fibre, micronutrients and unsaturated fatty acids, which are considered to act as protective factors against diabetes (Satija et al., 2016). In addition, Mayo (2015) states that the management of diabetes is mostly based on a behavioural approach in which the individual could establish nearly complete control of their condition as long as they have been equipped with the right knowledge and skills. This suggests that effective management of diabetes could result in better glycaemic control and psychological well-being.

A meta-analysis (Yokoyama, Barnard, Levin & Watanabe, 2014) focussing upon vegetarian diets (defined as those excluding meat, poultry and fish and including eggs and dairy) in diabetes revealed a significantly improved HbA1c in people who followed a vegetarian diet pattern. No systematic review was found in the literature solely focussing on the effectiveness of plant-based diet interventions in adults with T2D.

1.0.4 Objectives

The aims of this review are to systematically analyse the available literature on plant-based diet interventions targeting diabetes in adults and to clearly define the benefits on well-being of such interventions. This review was not limited to potential improvements of psychological well-being and quality of life of the individuals with T2D who followed plant-based diet interventions but also to improvements in physical health linked with T2D. The question of this systematic review is:

- What are the psychological well-being benefits and physical health improvements for adults with T2D that could be achieved through plant-based diet interventions?

2.0 METHODS

The incorporation of the PRISMA guidelines was utilised in order to conduct this review (Harms, 2009; Liberati et al., 2009). A systematic literature search was conducted for clinical trials in adults (age ≥ 18 years) with T2D in which plant-based diet interventions were used for at least three weeks. The following criteria were considered for inclusion in the systematic review: (1) plant-based diet interventions targeting or including adults with T2D; (2) age of participants ≥ 18 years; (3) clearly defined health outcomes; (4) CTs with length of ≥ 3 weeks, and (5) peer reviewed studies. The exclusion criteria were: (1) diet interventions for diabetes other than type 2; (2) age of participants < 18 years; (3) uncontrolled studies; (4) diet interventions that included more than 10% of daily calories on animal products, and (5) duplicate results.

Table 1: Selection criteria

Participants	Adults aged ≥ 18 years
Intervention	CTs targeted to examine the impact of plant-based diet interventions on T2D
Outcomes	Psychological and physical well-being outcomes
Study design	CTs

2.0.1 Search strategy

A computerised systematic search was performed in November 10th, 2017 in the following electronic databases: AMED, CENTRAL, CINAHL, E-Journals, EMBASE, MEDLINE, HMIC, PsycARTICLES, PsycINFO, PubMed, SocINDEX and Web of Science. In order to search for further potentially eligible research material, the reference lists of studies with relevant topic were searched and reviewed. The following were the search terms used to locate/find studies: (1) plant based OR plant-based OR “plant based” OR plant food OR “plant food” OR vegan* OR vegetarian* OR “Daniel fast”; (2) diabet* OR T2D OR DT2, and (3) intervention* OR program* OR “controlled trial*” OR “randomised controlled trial*” OR “randomized controlled trial*” OR RCT.

Table 2: Search terms

	AND	**AND**
Plant based **OR** plant-based **OR** ”plant based” **OR** plant food **OR** “plant food” **OR** vegan* **OR** vegetarian* **OR** “Daniel fast”	Diabet* **OR** T2D **OR** DT2	Intervention* **OR** program* **OR** “controlled trial*” **OR** “randomised controlled trial*” OR “randomized controlled trial*” **OR** RCT

2.0.2 Data extraction

The following data was collected from each study as available: quality of life, self-esteem, depression, perceived pain and neuropathy symptoms, foot conductance, nutritional efficacy, general efficacy, dietary adherence, dietary restraint, dietary disinhibition, diet acceptability, HbA1c, weight, FBG, total cholesterol, LDL cholesterol, triglycerides and diabetes-related medication. In addition, baseline characteristics of each study’s sample size, mean age, gender (proportion of men), design and duration were collected. Mean values for baseline age, proportion of male population and HbA1c were also calculated.

2.0.3 Data screening and quality measures

The search results from the databases were combined and then the identified duplicates were removed. The described inclusion criteria were applied in a standardised manner and relevant studies were screened using the title, abstract and full text of the article.

The Quality Assessment Tool for Quantitative Studies is a standardised quality appraisal instrument that was developed by the EPHPP of McMaster University for assessing the quality of public health research (National Collaborating Centre for Methods and Tools, 2008). The instrument has been evaluated for inter-rater reliability, content validity and construct validity and has received high scores (Armijo-Olivo, Stiles, Hagen, Biondo & Cummings, 2012; Thomas, Ciliska, Dobbins & Micucci, 2004). This quality assessment tool and its dictionary are provided at www.ephpp.ca. Two researchers carried out the quality assessment independently. The identified relevant studies were critically assessed according to the EPHPP’s tool and rated as ‘strong’, ‘moderate’ or ‘weak’ in six sections: (1) selection bias; (2) study design; (3) confounders; (4) blinding; (5) data collection methods, and (6) withdrawals and dropouts. The aim of the quality assessment was to extract results from studies with an overall ‘strong’ or ‘moderate’ methodological rating. Studies that were rated as ‘poor’ have been excluded from the systematic review. Please see Table 1 for the results of quality assessment of included studies.

Table 3: Quality assessment results for the included studies

Author(s)/Year	Selection Bias	Study Design	Confounders	Blinding	Data Collection Methods	Withdrawal and Dropouts	Global Rating
Wright, Wilson, Smith, Duncan & McHugh, (2017)	Moderate	Strong	Weak	Moderate	Strong	Moderate	Moderate
Lee, Kim, Lee, Kim, Park, Jeong, Jeon, Shin & Lee, (2016)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Bunner, Wells, Gonzales, Agarwal, Bayat & Barnard, (2015)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Soare, Khazrai, Del Toro, Roncella, Fontana, Fallucca, Angeletti, Formisano, Capata, Ruiz, Porrata, Skrami, Gesuita, Manfrini, Fallucca, Pianesi & Pozzilli, (2014)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Mishra, Xu, Agarwal, Gonzales, Levin & Barnard, (2013)	Moderate	Strong	Strong	Moderate	Strong	Moderate	Strong
Kahleova, Hrachovinova, Hill & Pelikanova, (2013)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Kahleova, Matoulek, Malinska, Oliyarnik, Kazdova, Neskudla, Skoch, Hajek, Hill, Kahle & Pelikanova, (2011)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Ferdowsian, Barnard, Hoover, Katcher, Levin, Green & Cohen, (2010)	Moderate	Strong	Strong	Moderate	Strong	Strong	Strong
Barnard, Gloede, Cohen, Jenkins, Turner-McGrievy, Green & Ferdowsian, (2009b)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Barnard, Cohen, Jenkins, Turner-McGrievy, Gloede, Green & Ferdowsian, (2009a)	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
Nicholson, Sklar, Barnard, Gore, Sullivan & Browning, (1999)	Strong	Strong	Strong	Moderate	Strong	Moderate	Strong

3.0 RESULTS

3.0.1 Study selection process

The search strategy retrieved 1,240 articles; 1 in the AMED (1985 through November 10, 2017), 124 in the CENTRAL (1898 through November 10, 2017), 25 in the CINAHL (1937 through November 10, 2017), 77 in the E-Journals (1850 through November 10, 2017), 147 in the EMBASE (1947 through November 10, 2017), 1 in the HMIC (1979 through November 10, 2017), 135 in the Medline (1865 through November 10, 2017), 33 in the PsycARTICLES (1894 through November 10, 2017), 13 in the PsycINFO (1887 through November 10, 2017), 116 in the PubMed (1946 through November 10, 2017), 275 in the SocINDEX (1895 through November 10, 2017) and 293 in the Web of Science (1900 through November 10, 2017). After removing the duplicates, the title/abstract screening process identified 41 studies. After a further full-text assessment, thirty articles were excluded from the systematic review and eleven met the inclusion criteria (please see Figure 1). No additional publications were found through reference lists and hand searching.

The included studies relied on different tools in order to extract psychological data outcomes, and therefore a meta-analysis was not possible in this regard. For the other outcomes of our study, we considered that because the overall pooled N in the study is small, the confidence intervals (CIs) would be quite wide due to imprecision, which might cause our pooled estimate to cross the null hypothesis, which would make it difficult to draw a conclusion in either direction. Dietary interventions are difficult to engage a large number of individuals as it is hard for participants to alter their dietary patterns for a medium/long period of time. Our aim was to present as clear as possible the physical and psychological outcomes of plant-based interventions.

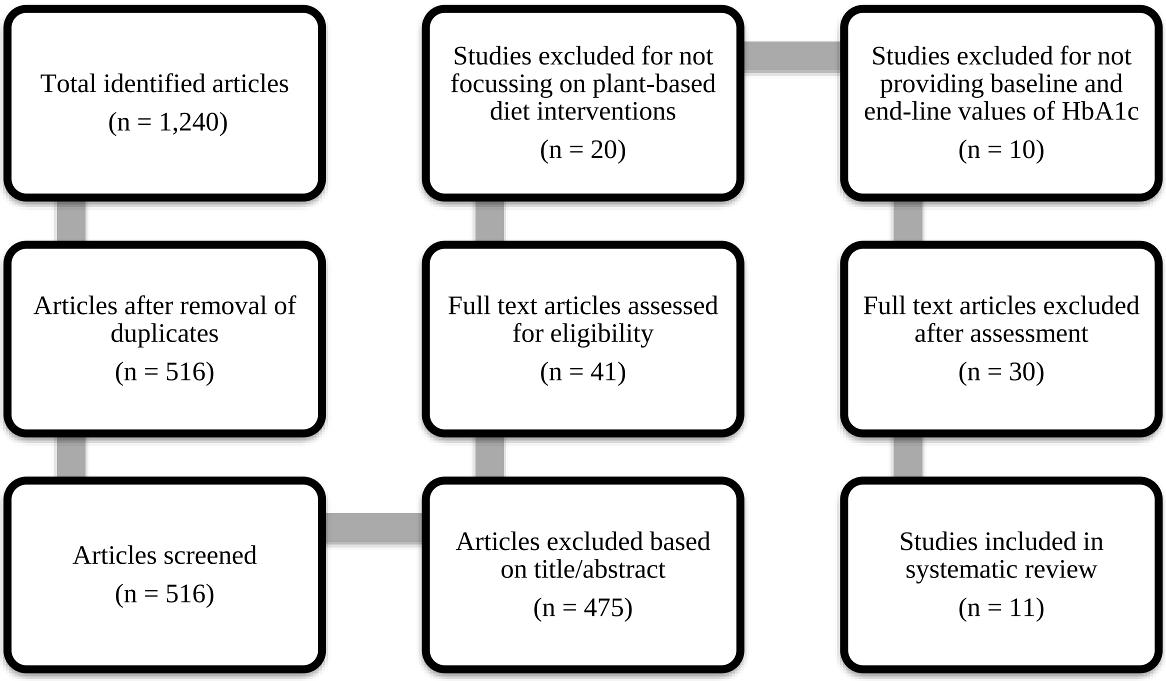

Figure 1: Study selection process

3.0.2 Study characteristics

The eleven included studies were published between 1999 and 2017 (please see Table 2). Two of the studies produced 2 articles from the same sample highlighting different aspects of research; these articles are included:

- Kahleova et al. (2013) used different data from Kahleova et al. (2011).
- Barnard et al. (2009b) used different data from Barnard et al. (2009a).

The majority of the studies (n=6) were conducted in the USA, while the rest took place in Czech Republic (n=2), Italy (n=1), New Zealand (n=1) and South Korea (n=1). One study had been conducted in a supervised residential environment (Soare et al., 2014), while the rest had been conducted in community-based settings. The total sample size was 433 participants (219 in the intervention groups/214 in the control groups; mean sample size 48), aged between 27 and 80 years (mean age 54.8 years). The number of withdrawals was reported in all studies, with the rates being between 3.5 per cent and 29.1 per cent. All studies targeted populations with T2D except for 3 (Wright et al., 2017; Mishra et al., 2013; Ferdowsian et al., 2010). Of these three studies, two included individuals with body mass index (BMI) ≥ 25 kg/m^2 and/or T2D (Mishra et al., 2013; Ferdowsian et al., 2010), and one also included individuals with BMI ≥ 25 kg/m^2 and at least one diagnosis of T2D or ischaemic heart disease or hypertension or hypercholesterolaemia (Wright et al., 2017). Therefore, not all of the participants of these 3 studies had T2D but in the results specific outcomes related to the individuals with T2D were described.

All included studies were CTs with a duration range between 3 and 74 weeks (mean duration 23.2 weeks). Of the nine CTs, seven were randomised controlled trials (RCTs), of which four reported the randomisation process (Wright et al., 2017; Lee et al., 2016; Bunner et al., 2015; Barnard et al., 2009a) and three failed to describe it (Soare et al., 2014; Kahleova et al., 2011; Nicholson et al., 1999). Moreover, two studies used a parallel design (Wright et al., 2017; Kahleova et al., 2011) and one used a cluster study design (Mishra et al., 2013). Eight of the studies examined vegan diets in the intervention groups, while one study examined plant-based diet with an option of one portion of low-fat yogurt a day, which accounted for approximately 8 per cent of the total daily intake of calories (Kahleova et al., 2011). A full description of the diet intervention was described in all of the articles. All studies reported HbA1c as their primary or secondary outcome, which was measured at baseline and at the end of each study in both groups. From the eleven articles included, three reported psychological well-being outcomes in their results (Wright et al., 2017; Bunner et al., 2015; Kahleova et al., 2013). The studies were dietary interventions and therefore none included blinding of participants. Five CTs provided nutritional education in both groups (Lee et al., 2016; Soare et al., 2014; Kahleova et al., 2011; Barnard et al., 2009a; Nicholson et al., 1999) and four provided education only to the intervention group (Wright et. al., 2017; Bunner et al., 2015; Mishra et al., 2013; Ferdowsian et al., 2010). All studies reported both baseline and end-line results and used validated measures. Highly specialised professionals (medical doctors, registered dieticians) delivered the dietary interventions in all of the studies.

Table 4: Data extraction of the studies used for the systematic review

Author(s), Year, Country	Study design	Duration (weeks)	Sample N (IG/CG)	Mean age (years) (IG/CG)	Males (%) (IG/CG)	HbA1c (%) IG (Baseline/End-line)	HbA1c (%) CG (Baseline/End-line)	Exposure diet	Comparator diet	Outcomes
Wright et al., 2017, New Zealand	RCT	24	9* (7/2)	56 (56/56)	40.0 (33.3/46.9)	6.0/5.7	5.5/5.7	Low-fat plant-based	Omnivorous	Quality of life significantly improved in the IG. General and nutritional self-efficacy and self-esteem was significantly greater in the IG than in the CG. Medication usage decreased in the IG group, while it increased in the CG. Adherence was significantly greater in the IG.
Lee et al., 2016, South Korea	RCT	12	93 (46/47)	58.1 (57.5/58.3)	19.25 (13.0/25.5)	7.7/7.1	7.4/7.2	Vegan	Korean Diabetic Association guidelines	Reduction in HbA1c was significantly greater in the IG than in the CG. FBG reduced only in the IG. There was a greater decrease in LDL cholesterol in the IG. Triglycerides increased in the IG and decreased in the CG. The CG reported higher rates of adherence.
Bunner et al., 2015, USA	RCT	20	34 (17/17)	57 (57/58)	44.1 (35.3/53.0)	8.0/7.2	7.8/7.8	Low-fat plant-based	Omnivorous	Quality of life significantly improved within the IG. Significant improvements in pain were found in the IG. The IG had a significant reduction in HbA1c. Reduction in weight was significantly greater in the IG than in the CG. Total and LDL cholesterol decreased in the IG and increased in the CG. There was a greater increase of triglycerides in the

										CG. Electrochemical skin conductance in the foot declined in the CG, while it stayed constant in the IG. Adherence in the IG was high.
Soare et al., 2014, Italy	RCT	3	51 (25/26)	66 (67/65)	49.0 (44.0/53.8)	6.7/6.3	6.8/6.6	Low-fat plant-based	Italian Association of Doctors of Diabetology guidelines	The IG had a significantly greater reduction in HbA1c than the CG. There was a significantly greater weight loss in the IG compared with the CG. FBG significantly decreased within-group only in the IG. Total and LDL cholesterol significantly declined only in the IG. Adherence was high in both groups.
Mishra et al., 2013, USA	CT	18	43Ł (21/22)	45.2 (44.3/46.1)	17.2 (22.5/12.1)	7.54/6.94	7.13/7.05	Low-fat vegan	Omnivorous	The IG had a significant reduction in HbA1c compared with the CG. Significant improvements in weight were found in participants with T2D.
Kahleova et al., 2013, Czech Republic	RCT	24	74± (37/37)	56.1 (54.6/57.7)	47.3 (46.0/49.0)	7.6/6.95	7.7/7.46	Plant-based	European Association for the Study of Diabetes guidelines	Depression and quality of life significantly improved only in the IG. Dietary disinhibition decreased significantly only in the IG. Dietary restraint increased significantly more in the CG. The IG reported high levels of adherence.
Kahleova et al., 2011, Czech Republic	RCT	24	74 (37/37)	56.1 (54.6/57.7)	47.3 (46.0/49.0)	7.6/6.95	7.7/7.46	Plant-based	European Association for the Study of	HbA1c significantly decreased only in the IG. Reduction in weight was significant only in the IG.

									Diabetes guidelines	Reduction in LDL cholesterol was significant only in the IG. There was a greater reduction in total cholesterol in the IG. Triglycerides reduced only in the IG, while increased in the CG.
Ferdowsian et al., 2009, USA	CT	22	19¤ (10/9)	44 (46/42)	17.7 (26.5/4.4)	7.4/7.1	7.0/6.7	Low-fat vegan	Omnivorous	HbA1c similarly decreased in both groups. Medium adherence was reported in the IG.
Barnard et al., 2009b, USA	RCT	74	99§ (49/50)	55.6 (56.7/54.6)	39.4 (45/34)	8.05/7.71	7.93/7.79	Low-fat vegan	American Diabetes Association guidelines	Dietary disinhibition and hunger decreased in both groups. Dietary restraint increased in greater degree in the CG than in the IG. Diet satisfaction, adherence and acceptability of diet was similar in both groups.
Barnard et al., 2009a, USA	RCT	74	99 (49/50)	55.6 (56.7/54.6)	39.4 (45/34)	8.05/7.71	7.93/7.79	Low-fat vegan	American Diabetes Association guidelines	HbA1c reduction was greater in the IG than in the CG. Significant weight loss within-group was reported in both groups. FBG significantly decreased within-group only in the IG. Total cholesterol and LDL cholesterol significantly declined in both groups. Triglycerides significantly decreased only in the IG.
Nicholson et al., 1999, USA	RCT	12	11 (7/4)	55.5 (51/60)	54.5 (57.1/50.0)	8.3/6.9	8.0/7.0	Low-fat vegan	Conventional Low-fat	HbA1c reduction was greater in the IG than in the CG. Weight loss and FBG

										significantly decreased only in the IG compared with the CG.

IG, intervention group; CG, control group; *, number of participants with T2D in the study. For all other characteristic variables, the N is 65 (33/32). †, characteristic variables extracted from Mishra, et al., 2013. Ł, number of participants with HbA1c data available. For all other characteristic variables, the N is 291 (142/149). ±, characteristic variables extracted from Kahleova, et al., 2011. ‡, characteristic variables extracted from Ferdowsian, et al., 2010. ¤, number of participants with HbA1c data available. For all other characteristic variables, the N is 113 (68/45). §, characteristic variables were extracted from Barnard, et al., 2009.

4.0 FINDINGS

4.0.1 Quality of life, psychological and social well-being

In the BROAD study in New Zealand, Wright et al. (2017) aimed to measure the quality of life and perceived health status of participants with BMI ≥ 25 kg/m^2 and at least one diagnosis of T2D or ischaemic heart disease or hypertension or hypercholesterolaemia. The number of individuals with T2D in this study was nine (seven in the intervention group and two in the control group). The Short Form Health Survey version 2 was administered to measure the perceived psychological and physical quality of life. Wright et al. (2015) administered an additional questionnaire in order to assess food enjoyment and diet cost among participants. Significant improvements in quality of life were identified in the intervention group in both psychological and physical components summary at 24 weeks ($p<0.001$; $p<0.0001$). The control group showed a significant improvement only in the physical component summary ($p=0.03$), having a slight drop in the psychological component summary at 24 weeks. Significant differences between the two groups in favour of the intervention group were reported for both the psychological and physical component summary at 24 weeks ($p<0.01$; $p=0.03$). Furthermore, statistically significant differences were reported at 24 weeks in favour of the intervention group for self-esteem ($p<0.01$), nutritional efficacy ($p<0.0001$) and general efficacy ($p=0.01$). Food enjoyment slightly improved in the intervention group, while it remained stable in the control group. No significant differences were reported between the two groups for diet costs. Overall, the intervention compared with the control group reported an improved quality of life, nutritional and general efficacy and self-esteem, without changes in food enjoyment and diet costs.

Bunner et al. (2015) conducted a twenty-week diet intervention study (low-fat plant-based diet vs omnivorous diet), targeting individuals with T2D and chronic diabetic neuropathic pain. In order to measure the level of depression and general mood they used the Beck Depression Inventory (BDI) and the Center for Epidemiological Studies Depression Revised screening tests. To assess quality of life the Norfolk Quality of Life Questionnaire was used. To measure the level of pain and sensory symptoms they used the Short Form of the McGill Pain Questionnaire, the Michigan Neuropathy Screening Instrument Questionnaire, the Patient’s Global Impression of Change, the Neuropathy Total Symptom Score, the Visual Analog Scale and weekly pain diaries (rating for worst, average and night pain). Sensory perception was measured with the Michigan Neuropathy Screening Instrument Physical Assessment and the Neuropathy Impairment Score Lower Limb screening tool. They also measured the electrochemical skin conductance in order to check nerve function. Improvements in depression were reported in both groups with the difference being greater in the intervention group at twenty weeks without reaching statistical significance. Quality of life improved in both groups at twenty weeks but the difference was significant within the intervention group ($p<0.05$). Pain significantly decreased between groups favouring the intervention group ($p=0.04$). There was a non-significant increase in foot and hand conductance in the intervention group, while there was a significant decline in foot conductance in the control group ($p=0.03$), suggesting that the intervention might have stopped or slowed down the progress of nerve impairment. Overall, the study showed that the intervention group experienced greater differences in quality of life and depression from baseline to twenty weeks and a significant reduction in pain compared with the control group. Moreover, the slight increase in electrochemical skin conductance in the intervention group and the significant decline of the control group makes the intervention promising for further testing in people with painful T2D neuropathy.

Kahleova et al. (2013), based on Kahleova et al. (2011) 24-week RCT, aimed to measure the quality of life and the level of depression among participants with T2D (n=74) who received a plant-based diet compared with those who received the European Association for the Study of Diabetes guidelines diet. The BDI was used to measure the level of depressive symptoms, while the Obesity and Weight-Loss Quality of Life and the Weight-Related Symptoms questionnaires used to screen for quality of life, general functional status and well-being. Depression levels dropped and reached statistical significance only in the intervention group ($p=0.03$). Quality of life at 24 weeks showed a greater improvement in the intervention group than the control group ($p=0.01$). The negative symptoms related to weight declined in both groups without reaching statistical significance. Overall, the results suggest that a plant-based diet could improve the mental health, depression and overall quality of life in people with T2D.

4.0.2 Adherence, acceptability, and diet behaviour

Barnard et al. (2009b), based on 74-week RCT conducted by Barnard et al. (2009a) which compared a low-fat vegan diet to the American Diabetes Association guidelines proposed diet in 99 participants (49 in the intervention group and 50 in the control group), aimed to measure the diet adherence, diet acceptability, cravings and dietary behaviour. All the participants had a one-hour consultation with a registered dietician in order to receive instructions in using the assigned diet and develop a diet plan. For the first 22 weeks participants attended one-hour weekly group workshops to receive further instructions for nutrition and cooking by a doctor, a registered dietitian and/or a cooking instructor. After the initial 22 weeks the participants had the option to attend or not to biweekly workshop group sessions for an additional 52 weeks. Adherence for both groups was assessed by unannounced phone calls, made by the registered dietician to each participant in order to obtain a 24 hours diet recall at 4, 8, 13, 20, 33, 45 and 60 weeks. Moreover, a three-day diet record was completed by each participant at baseline, 11, 22 and 74 weeks. Adherence for the intervention group was defined as the complete abstinence from meat, fish, eggs and dairy intake. Additionally, the intervention group had to keep an average daily cholesterol intake ≤ 50 mg, an average daily saturated and total fat intake of ≤ 5 per cent and ≤ 25 per cent, respectively. The control group's adherence was defined as no more than 200 kCal in excess of the allocated American Diabetes Association diet and as an average daily saturated fat consumption of ≤ 10per cent of energy. The Food Acceptability Questionnaire, the Eating Inventory and the Food-Craving Inventory were used for screening the dietary disinhibition, dietary restraint and feelings of hunger. Dietary disinhibition is the level of overeating as a response to stressful stimuli. Dietary restraint indicates the level of confinement that participant feel by their diet. There was a significant difference in adherence rates at 22 weeks between groups with a rate of 44 per cent for the control group and 67 per cent for the intervention group (p=0.019). At 74 weeks the intervention group reported a higher percentage of adherence than the control group, 51 and 48 per cent respectively, though the difference was no longer significant. Dietary restraint increased to a greater extent at 22 weeks in the control group than in the intervention group (p=0.003), suggesting that the American Diabetes Association diet group felt more constrained by their assigned diet than the participants of the low-fat vegan diet group. The control group participants at 74 weeks reported higher numbers of dietary restraint than the intervention group but the difference was no longer significant. Hunger and dietary disinhibition declined in both groups at 22 weeks and remained similar at 74 weeks suggesting that individuals in both groups were feeling less hungry compared with baseline and they were less likely to overeat as a response to stressful stimuli. No significant differences between the two groups were reported with regard to food acceptability. Within-group analysis demonstrated significant improvement in levels of energy only in the intervention group (p<0.001), while the control group reported significant improvement in digestion ($p<0.05$). Food cravings scores dropped in both diet groups and at 74 weeks no significant differences between the two groups reported. Overall, the study suggests that adherence was similar in both groups from baseline to end-line, the low-fat vegan diet was slightly more demanding in initial effort and the American Diabetes Association diet was more likely to be described as constraining. Moreover, there was no indication of lack of acceptability for both diets.

Ferdowsian et al. (2010) monitored adherence via unannounced phone calls made by a registered dietician at 2, 8 and 16 weeks only to intervention group participants to administer a 24-hour diet recall. The intervention group also completed a three-day diet diary at baseline and 22 weeks that was used for further analysis. The intervention group received weekly educational group workshops with instructions and guidance on a low-fat vegan diet facilitated by a doctor, registered dietician and/or a cooking instructor. The control group did not receive educational workshops or other type of instructions and guidance. No significant differences between the two groups at baseline were identified. Ferdowsian et al. (2010) set five criteria for monitoring adherence: (1) the absence of all animal products (meat, fish, dairy, eggs) as reported on the three-day diet diary and the 24-hours recalls; (2) saturated fat < 5 per cent of total energy; (3) total fat < 25 per cent of total energy; (4) average cholesterol intake < 50 mg, and (5) attending more than ten weekly group workshops. The number of participants who managed to stay within the prescribed limit were as follows: (1) all criteria were met by 44 per cent of participants in the intervention group; (2) 57 per cent reported a complete abstinence from animal products consumption; (3) 72 per cent stayed within the saturated fat intake limits; (4) 72 per cent stayed within the total fat intake limits; (5) 79 per cent stayed within the cholesterol intake limits, and (6) 71 per cent attended more than ten weekly group workshop sessions. Overall, complete adherence to the low-fat vegan diet was reported in approximately half of the participants.

Kahleova et al. (2011) monitored the adherence among the intervention and control group, while Kahleova et al. (2013) assessed the diet acceptability between the two groups. Participants in both groups were provided with one-week tutorial sessions with instructions for diet preparation. Then, weekly one-hour group workshops were provided to all the participants involving cooking classes and lectures. All meals were offered while records were kept in order to monitor participants’ visits to pick the meals up. Moreover, a three-day diet diary was completed by participants at baseline, 12 and 24 weeks. A registered dietician made unannounced calls at 3, 8, 14 and 19 weeks in order to obtain a 24-hour diet recall by each participant. The Three-Factor Eating Questionnaire was administered to monitor the eating behaviour in both groups. High and medium adherence in both groups was set to ≤ 100 kCal and ≤ 200 kCal of the average daily energy intake respectively. If participants could not meet the above criteria their adherence was characterised as low. Additionally, for high adherence the intervention group had to keep an average daily cholesterol intake ≤ 50 mg and for medium adherence an average daily cholesterol intake ≤ 100 mg. The control group had to keep an average daily cholesterol intake ≤ 200 mg for high adherence and ≤ 300 mg for medium adherence. No significant differences between the two groups at baseline were identified. The intervention group reported greater rates of high adherence compared with the control group at 24 weeks: high adherence was monitored among 55 per cent of participants in the plant-based diet group and 32 per cent of participants in the control group; 22.5 per cent of participants of the intervention group and 39 per cent of participants in the control group reported medium adherence; low adherence was observed among 22.5 per cent in the intervention group and 29 per cent in the control group. Kahleova et al. (2013) showed that dietary disinhibition decreased significantly only in the intervention group at 24 weeks (p=0.01). Dietary restraint increased in both groups, with the increase being significantly higher in the control group (p=0.04). The feeling of hungriness decreased in both groups at 24 weeks. Overall, the results suggest that the plant-based diet group reported higher rates of high adherence and significant decrease of dietary disinhibition compared with the control group, which reported significant higher levels of dietary restraint. The results suggest that participants in the intervention group felt less constrained with their diet and were less likely to overeat as response to stressful stimuli.

Mishra et al. (2013) aimed to determine the adherence in a low-fat vegan diet compared with an omnivorous diet for 18 weeks among workers with BMI ≥ 25 kg/m^2 and/or T2D. The individuals with T2D in this study were 43 (21 in the intervention group and 22 in the control group). The intervention group received weekly, one-hour workshops facilitated by a medical doctor, a registered dietician and/or a cooking instructor. The sessions provided educational information about nutrition, diet effects on diabetes, weight loss, heart conditions and cancer. Participants also received cooking instructions and guidance. The control group did not receive nutritional education and was not offered weekly workshops. Adherence was monitored by two 24-hour self-administered online diet recalls at baseline and at 18 weeks and by keeping daily cholesterol intake below 50 mg. The intention-to-treat (ITT) analysis showed that the 61 per cent of intervention group participants managed to complete the diet recalls at 18 weeks, while the percentage in the control group was 73 per cent. The daily cholesterol intake criterion was met by the 47 per cent of the intervention group participants and by the 12 per cent of the control group participants. The results showed that adherence was greater among the intervention group compared with the control group, suggesting high rates of acceptability of the low-fat vegan diet among the participants of the intervention group.

Soare et al. (2014) conducted a three-week diet intervention (low-fat plant-based vs Italian Association of Doctors of Diabetology guidelines) among 51 participants (25 in the intervention group and 26 in the control group) with T2D. The participants in the intervention group attended a two-hour daily workshop, facilitated by medical doctors, registered dietitians and/or cooking instructors who provided education about nutrition and cooking guidance. The control group also attended two-hour daily workshops with similar subjects at a different location. All meals were provided to both groups. In order to monitor both groups' adherence, meals were strictly monitored by the medical doctors and registered dietitians. Participants of both groups had to attend a minimum of twenty out of 21 meals otherwise they were considered as non-adherent. Adherence among both groups was high as there were no missing meals by any participant.

Bunner et al. (2015) monitored adherence among participants of the intervention group by conducting diet records at ten and twenty weeks. Out of the 17 participants of the intervention group, 13 avoided all animal products when were assessed at both ten and twenty weeks. The results suggest that adherence in the intervention group was high.

Lee et al. (2016) compared the effect of vegan diet and the Korean Diabetic Association guidelines diet on diabetes management, among 93 participants (46 in the intervention group and 47 in the control group) with T2D, for a period of twelve weeks. Both groups received education about nutrition and cooking instructions by a registered dietitian for one hour at baseline and four weeks. A registered dietitian made phone-call assessments one time per week in order to record the dietary behaviour in both groups. Moreover, the dietitian provided consultation by answering participants' questions and encouraged the recording of daily diet. To monitor the adherence, a registered dietitian made twelve unannounced phone calls during the intervention in order to collect 24-hour diet recalls. Participants in both groups had also to complete a diet record in a daily basis. The control group reported higher adherence compared with the intervention group (p=0.002). Also, the percentage of participants who reported high adherence was significantly higher in the control group, with 78.7 per cent compared with the 30.4 per cent of the intervention group ($p<0.001$). Overall, the control group had higher rates of adherence.

In their study, Wright et al. (2017) offered two-hour workshops twice per week for a duration of twelve weeks to the intervention group participants. The sessions involved cooking guidance by a cooking instructor, educational presentations by medical doctors, group discussions and screening of documentaries. No workshops were provided to the control group. The Big Five Inventory screening tool was used to assess the adherence in both groups. Adherence was also assessed by collecting three-day recall forms from participants to identify any diet indiscretions and additionally for the intervention group by attendance to the provided workshops. The intervention group workshop attendance was 79 per cent among the participants. There was a significant difference in decrease in diet indiscretions in the intervention group compared with the control group at 24 weeks ($p<0.0001$). The within-group decrease in the control group was smaller than the decrease in the intervention group, but met statistical significance ($p<0.05$). The study showed that adherence was significantly high at 24 weeks in both groups but was significantly greater among participants of the intervention group.

4.0.3 HbA1c and diabetes control

All nine RCTs provided baseline and end-line measures for HbA1c. In eight RCTs the decrease of HbA1c was greater among participants in the intervention groups compared with the control groups, while in one RCT (Ferdowsian, et al., 2010) the decrease was similar in both groups. After excluding Wright et al. (2017) for reasons of not reporting HbA1c levels specifically for participants with T2D, the mean difference among the eight RCTs that provided specific HbA1c levels for participants with T2D between baseline and end-line measurements shows a decrease of 0.55 per cent in the intervention groups and 0.19 per cent in the control groups. The results suggest that participants in the intervention groups managed to better control their diabetes via the plant-based diet compared with participants in the control groups. Nicholson et al. (1999) reported a decrease of HbA1c of 1.4 per cent and 1.0 per cent among participants of the intervention and control group respectively. The reduction was greater in the low-fat vegan group compared with the conventional low-fat group without meeting statistical significance.

In Barnard et al. (2009a) RCT the ITT analysis showed a decrease of HbA1c levels of 0.34 per cent in the intervention group and 0.14 per cent in the control group, without reaching statistical significance. When the confounder of medication changes was removed additional analyses were conducted. Within-group analysis reported a significant decrease of 0.4 per cent of HbA1c levels from baseline to end-line only in the intervention group (p<0.01), while there was an increase of 0.01 per cent in the control group. Between-group analysis reported a significant decrease of HbA1c only in the intervention group (p=0.03) compared with the control group. Moreover, in the within-group analysis among the completers whose medication remained unchanged (n=35; 14 in the intervention group and 21 in the control group), HbA1c significantly decreased by 0.82 per cent in the intervention group (p=0.04) and by a non-statistically significant 0.21 per cent in the control group. Overall, both groups reported lower levels of HbA1c at 74 weeks, with the decrease being greater in the intervention group, but without meeting statistical significance. Significant decreases in HbA1c levels were reported in the intervention group compared with the control group in analyses controlling for medication changes.

Ferdowsian et al. (2010) reported a similar decline of HbA1c of 0.3 per cent from baseline to 22 weeks among participants of both intervention and control group, without meeting statistical significance. Further analysis of HbA1c levels among participants whose medication remained unchanged (n=11; 5 in the intervention group and 6 in the control group) showed a greater decrease of 1 per cent in the intervention group compared with a decrease of 0.2 per cent in the control group. The sample was too small for statistical tests. Overall, without controlling for medication changes, HbA1c decreased similarly in both groups from baseline to 22 weeks. Among participants without medication changes, the decrease was greater in the intervention group.

Kahleova et al. (2011) study showed a significant within-group reduction in HbA1c of 0.65 per cent in the intervention group (p<0.001) and a non-significant reduction of 0.21 per cent in the control group, from baseline to end-line. Between-group analysis demonstrated a greater reduction among participants in the intervention group compared with the control group from baseline to 24 weeks, but it was not statistically significant. Controlling for medication adjustments, HbA1c significantly decreased by 0.9 per cent only in the intervention group (p=0.002) and by 0.2 per cent in the control group. Results suggest that intervention group reported greater decline in HbA1c levels from baseline to 24 weeks compared with the control group, with decline being significantly greater in the intervention group among participants whose medication remained unchanged.

In ITT analysis, Mishra et al. (2013) reported a reduction of 0.6 per cent in HbA1c in the intervention group and 0.08 per cent in the control group. The reduction was significantly greater in the intervention group compared with the control group (p=0.004). Further analysis among intervention completers revealed a significant greater decrease of 0.74 per cent among participants in the intervention group compared with 0.1 per cent decrease of the control group (p=0.003).

In Soare et al. (2014) RCT the HbA1c reduced in both groups from baseline to end-line. The reported reduction in HbA1c was 0.4 per cent in the intervention group and 0.2 per cent in the control group. The reduction of HbA1c among participants in the intervention group was significantly greater compared with the reduction in the control group (p=0.002).

Bunner et al. (2015) reported within-group significant reduction of HbA1c levels from baseline to end-line only in the intervention group (p<0.05) while in the control group HbA1c remained unchanged. More specifically, HbA1c reduced by 0.8 per cent among participants in the intervention group from baseline to twenty weeks.

Lee et al. (2016) reported significant declines of HbA1c in both groups with the decline being greater in the intervention group. Within-group HbA1c differences were significant in both the intervention (p<0.01) and the control group (p<0.05) as HbA1c significantly decreased by 0.6 per cent and 0.2 per cent in the intervention and the control group respectively. Furthermore, between the two groups the decrease was significantly greater in the intervention group compared with the control group (p=0.017). An additional analysis among participants who reported high adherence showed a greater difference of HbA1c levels between the two groups; a significant within-group decrease of 0.9 per cent in the intervention group (p<0.01) and a significant within-group decrease of 0.3 per cent in the control group (p<0.05). The reported decrease between the two groups was significantly greater in the intervention group compared with the control group among participants of high adherence (p=0.01). Overall, the study showed that HbA1c significantly declined in both groups from baseline to twelve weeks, with the decrease being significantly greater among participants in the intervention group.

The study conducted by Wright et al. (2017) did not provide specific measures of HbA1c for the participants with T2D (n=9; 7 in the intervention group and 2 in the control group).

4.0.4 Further outcomes

Six studies reported a reduction or discontinuation of diabetes-related medication among participants at end-line (Wright et al., 2017; Bunner et al., 2015; Soare et al., 2014; Kahleova et al., 2011; Barnard et al., 2009a; Nicholson et al., 1999). Interestingly, Nicholson et al. (1999) mentioned that two intervention group participants on insulin decreased their insulin doses from baseline to end-line. Moreover, three intervention group participants decreased and one discontinued the oral hypoglycaemic treatment. Additionally, two participants in the intervention group discontinued the antihypertensive medication at end-line. In contrast, participants in the control group did not have changes on their medication. Barnard et al. (2009a) reported that 35 per cent (n=17) of the participants in the intervention group reduced their T2D medication in contrast to 20 per cent (n=10) of the participants in the control group. In the RCT conducted by Kahleova et al. (2011) the diabetic medication reduced in 43 per cent of participants in the intervention group and in 5 per cent of participants in the control group. Soare et al. (2014) mentioned that from a total of seven participants on oral hypoglycaemic medication in the intervention group, five of them discontinued their medication. In the control group one participant discontinued the oral hypoglycaemic medication treatment. Similarly, Bunner et al. (2015) reported that ten participants in the intervention group reduced the glucose-lowering treatment, while in the control group one participant reduced the glucose-lowering medication. Moreover, four intervention group participants decreased the lipid-lowering medication while no participant reduced it in the control group. Wright et al. (2017) reported that two participants with T2D in the intervention group did no longer meet the criteria for T2D diagnosis at end-line.

Two studies reported an increase in diabetes-related medication at end-line (Bunner et al., 2015; Barnard et al., 2009a). Barnard et al. (2009a) reported that 14 per cent (n=7) of the participants in the intervention group and 23 per cent (n=12) participants of the control group increased the diabetes medication doses. Bunner et al. (2015) showed that two participants in the intervention group and two in the control group increased the glucose-lowering medication.

Also, the lipid-lowering medication increased in one intervention group participant and in three control group participants.

Nicholson et al. (1999) reported a significant reduction between the intervention group and the control group in weight ($p<0.005$) and in FBG ($p<0.05$).

In Barnard et al. (2009a) RCT, ITT analysis showed a significant within-group loss of weight in participants in both the intervention ($p<0.0001$) and the control group ($p<0.001$), with the reduction being greater in the low-fat vegan group from baseline to end-line. FBG decreased in both groups but the within-group decrease was statistically significant only in the intervention group ($p<0.01$). Total cholesterol and LDL cholesterol both significantly declined in the intervention ($p<0.0001$; $p<0.01$) and the control group ($p<0.01$; $p<0.05$), while triglycerides declined in both groups but the reduction was significant only in the intervention group ($p<0.05$). After controlling for changes in medication, further analyses reported statistically significant within-group reduction from baseline to end-line in FBG ($p<0.05$), total cholesterol ($p<0.0001$), LDL cholesterol ($p<0.0001$) and triglycerides ($p<0.01$) only among participants of the low-fat vegan group. Moreover, the decline in total cholesterol ($p<0.01$) and LDL cholesterol ($p<0.03$) levels were significantly reduced in participants in the intervention group compared those in the control group.

Kahleova et al. (2011) reported a weight reduction in both groups but only in the intervention group the reduction was significant ($p<0.001$). Similarly, FBG was decreased in both groups at 24 weeks but the decrease was significantly greater only in the intervention group ($p<0.001$). Total cholesterol reduced in both groups, with greater reported reduction in the intervention group without meeting statistical significance. Furthermore, LDL cholesterol decreased in both groups but it was significantly lower from baseline to end-line only in the intervention group compared with the control group ($p<0.05$). Finally, triglycerides declined only in the intervention group without meeting statistical significance, while being increased in the control group.

The results reported by Soare et al. (2014) showed a significant weight loss in both groups, with weight loss being significantly greater in the intervention group compared with the control group ($p<0.001$). FBG was also decreased in both groups, with the within-group reduction being significantly greater in the intervention group only. A significant decline in total cholesterol and LDL cholesterol was observed in the intervention group compared with the control group ($p<0.001$).

In Bunner et al. (2015) the outcomes showed a significant within-group decrease in weight only in the intervention group ($p<0.0001$) and a significantly greater weight loss in the intervention group compared with the control group from baseline to end-line ($p<0.001$). There was a non-statistically significant reduction in total cholesterol and LDL cholesterol levels in the intervention group, while both were increased in the control group. Triglycerides were increased in both groups, with the increase being greater among participants in the control group.

Lee et al. (2016) reported a reduction in FBG only in the intervention group, without meeting statistical significance. LDL cholesterol decreased in both groups with the decrease being higher among participants in the intervention group without meeting statistical significance either. Triglycerides surprisingly were increased in the intervention group and decreased in the control group, without reaching statistical significance in both groups.

5.0 DISCUSSION

This systematic review included eleven studies and aimed to evaluate the psychological and physical outcomes of plant-based diet interventions in controlling T2D in adults. The review demonstrates evidence that a plant-based diet can significantly improve the psychological well-being, the quality of life, the control of T2D measured by HbA1c and a number of physical characteristics (weight loss, FBG, total cholesterol, LDL cholesterol, triglycerides) in people with T2D.

Three studies reported results with regard to psychological and quality of life outcomes (Wright et al., 2017; Bunner et al., 2015; Kahleova et al., 2013). More specifically, there were significant improvements in the intervention group compared with the control group in depression (Kahleova et al., 2013), emotional well-being (Wright et al., 2017), physical well-being (Wright et al., 2017) and general quality of life (Wright et al., 2017; Bunner et al., 2015; Kahleova et al., 2013). Further outcomes showed a significant decrease of reported pain among participants in the intervention group (Bunner, et al., 2015). The participants of the intervention groups reported greater psychological results and an improved quality of life in all three studies.

Participants' adherence was reported in eight of the studies (Wright et al., 2017; Lee et al., 2016; Bunner et al., 2015; Soare et al., 2014; Mishra et al., 2013; Kahleova et al., 2011; Ferdowsian et al., 2010; Barnard et al., 2009b;). Reported adherence was higher among participants of the intervention groups compared with the control groups in four studies (Wright et al., 2017; Mishra et al., 2013; Kahleova et al., 2011; Barnard et al., 2009b). In contrast Lee et al. (2016) reported that control group showed significant higher adherence compared with the intervention group. A potential explanation for this difference might be the absence of weekly workshops, as Lee et al. (2016) used only phone consultations, while the four studies with high adherence results in the intervention groups carried out weekly educational sessions. One study reported high adherence in both the intervention and the control group (Soare et al., 2014), potentially because the education was provided on a daily basis and the RCT was conducted in a supervised environment. Moreover, two of the studies monitored the adherence only in the intervention group and reported high (Bunner et al., 2015) and medium levels of adherence (Ferdowsian et al., 2010). These results of the systematic review suggest that providing consistent nutrition education can better support people to adapt more effectively to a plant-based diet, as high dietary adherence and compliance is linked with educational interventions (Sun, You, Almeida, Estabrooks & Davy, 2016; Askari, Rabiei & Rastmanesh, 2013; Sharifirad, Entezari, Kamran & Azadbakht, 2009).

Three studies monitored the diet behaviour and diet acceptability among participants in both groups from baseline to end-line (Mishra et al., 2013; Kahleova et al., 2013; Barnard et al., 2009b). Dietary disinhibition significantly decreased in the intervention group while dietary restraint significantly increased only in the control group (Kahleova, et al., 2013). Barnard et al. (2009b) reported that both diets were equally well-accepted by participants in both groups. Kahleova et al. (2013) results suggested that the plant-based diet was highly accepted by the participants as the dietary restraint and dietary disinhibition were significantly improved in the intervention group.

With regard to diabetes control, this systematic review demonstrates that a plant-based diet intervention can significantly reduce HbA1c in adults with T2D and potentially reduce diabetes medication. Eight of the included studies reported baseline and end-line HbA1c levels of participants with T2D (Lee et al., 2016; Bunner et al., 2015; Soare et al., 2014; Mishra et al., 2013; Kahleova et al., 2011; Ferdowsian et al., 2010; Barnard et al., 2009a; Nicholson et al., 1999). All eight studies reported a greater reduction of HbA1c levels among participants in the intervention groups compared with the control groups, with an average decrease of 0.55 per cent in the intervention groups and 0.19 per cent in the control groups. This result is consistent with the findings of previous research (Yokohama, Barnard, Levin & Watanabe, 2014). Furthermore, findings from six studies reported a reduction or discontinuation of diabetes-related medication in the intervention groups (Wright et al., 2017; Bunner et al., 2015; Soare et al., 2014; Kahleova et al., 2011; Barnard et al., 2009a; Nicholson et al., 1999).

Five studies reported significant greater weight loss in the intervention group (mean weight loss 6.06 kg) compared with the control group (mean weight loss 2.66 kg) from baseline to end-line (Bunner et at., 2015; Soare et al., 2014; Kahleova et al., 2011; Barnard et al., 2009a; Nicholson et al., 1999). Three studies reported significant improvements in FBG levels (Kahleova et al., 2011; Barnard et al., 2009a; Nicholson et al., 1999). Two studies demonstrated a significant decrease in LDL cholesterol levels in the intervention groups (Kahleova et al., 2011; Barnard et al., 2009a), while one study showed a decrease in total cholesterol and triglycerides levels (Barnard et al., 2009a). There are studies that have demonstrated that a plant-based diet can significantly lower total cholesterol, LDL choresterol, triglycerides and the overall risk for CVD (Dinu, Abbate, Gensini, Casini & Sofi, 2017; Jenkins et al., 2014; Ferdowsian & Barnard, 2009; Jenkins et al., 1995). This is noteworthy because CVD is one of the main comorbidities of T2D (Health and Social Care Information Centre & Diabetes UK, 2013; Long & Dagogo-Jack, 2011) and one of the main causes of premature mortality in the diabetic population (Kato et al., 2015; Peters, Huxley & Woodward, 2014; Nwaneri, Cooper & Bowen-Jones, 2013; Seshasai et al., 2011; Saydah, Tao, Imperatore & Gregg, 2009).

The present systematic review has several strengths. It is the first review, to our knowledge, that attempted to summarise the significant psychological outcomes of a plant-based diet intervention in adults with T2D. Furthermore, the included CTs conducted in several different countries (Czech Republic, Italy, New Zealand, South Korea and USA), which suggests that generalisability of the findings in the UK setting is likely. Also, by reviewing CTs which focus on dietary patterns and not isolated nutrients makes the findings of the review easier to be applied to the general population. Finally, when plant-based diets were compared with official guidelines from a number of countries, the plant-based diet was found to be superior. Although this is a preliminary review of evidence specific to people with T2D, other research which includes but is not specific to people with diabetes supports the psychological findings (Agarwal et al., 2015; Katcher, Ferdowsian, Hoover, Cohen & Barnard, 2010).

This systematic review also has limitations. The included studies had rather small sample sizes although there were adequate to estimate significance levels. Another limitation is that two of the studies were not randomised (Mishra et al., 2013; Ferdowsian et al., 2010). In addition, adherence in CTs regarding diet is difficult to be followed and measured by researchers because is highly dependent on participants' recalls, which might be inaccurate.

6.0 CONCLUSIONS

Based on the evidence of the research analysis by this systematic review, it can be concluded that plant-based diets accompanied by educational interventions can significantly improve psychological health, quality of life, HbA1c levels and weight and therefore the management of diabetes. Furthermore, plant-based diets could potentially improve diabetic neuropathic pain and the levels of total cholesterol, LDL cholesterol and triglycerides in T2D.

There is further need of studies to explore the relationship between psychological health, dietary patterns/behaviour and diabetes control. Future studies could explore ways of delivering proper nutritional education in order to support participants to follow healthier dietary patterns.

7.0 REFERENCES

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