Professional Doctorate in

Health Psychology

Thesis Portfolio

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2015

Submitted in partial fulfilment of the requirements of London Metropolitan University for the degree of Professional Doctorate in Health Psychology

CONTENTS

*Unit refers to British Psychological Society Professional Competency for Health Psychology

ACKNOWLEDGEMENTS

AUTHOR'S DECLARATION

I, Tilean Naomi Clarke declare that while registered as a student for the University's research degree, I have not been a registered student or enrolled student for another award of a UK university or other academic or professional institution. I declare that no material contained in the thesis has been used in any other submission for an academic award and I declare that my research complies with UK legislation governing research.

SECTION A

PREFACE

THE JOURNEY OF BECOMING A HEALTH PSYCHOLOGIST

This portfolio and the competency folders that contain two years of reflective practice logs demonstrate evidence of how I have met the required competencies for the Professional Doctorate in Health Psychology. In the form of four case studies, one systematic review and a research thesis conducted over a period of two years, it displays my breadth of health psychology application. Furthermore, it consists of a range of practical experiences of how I have put health psychology theories and constructs into practice within NHS, charity and corporate settings.

The experiences I illustrate in this portfolio have been heavily placed in public health and fit within the Public Health Outcomes Framework for England 2013 - 2016 (Department of Health 2012). This framework sets out to improve and protect the nation's health and wellbeing and reduce health inequalities (Department of Health, 2012) which health psychology contributes to. This portfolio details how I have developed as a reflective practitioner through a variety of experiences, including smoking cessation, breast cancer and ovarian cancer, in which the majority of learning took place.

A major part of this portfolio is section B1 (p. 11), which documents my research thesis. My research thesis is an original contribution to the health psychology literature and focused on adolescent's views of the electronic cigarette (e-cigarettes). It is an area of work that I found enjoyable and rewarding, due to its unique contribution to a very current and fast moving field. My research examined use and awareness in an adolescent sample and investigated the impact of flavoured products on adolescents' willingness to try. It also explored whether the social prototypes adolescents assigned to smokers and e-cigarette users, had an impact on their willingness to try an e-cigarette and their susceptibility to smoking conventional cigarettes. Using a between-subjects design, survey data was collected from 256 adolescent sixth form students, aged 16 to 19 years who consented to take part in the study. The data was analysed using chi-squared analysis and hierarchical multiple regression. I found that nearly all of the adolescent population in this study were aware of the e-cigarette and use whilst at low levels, had increased from the 10% use demonstrated in a previous UK survey carried out in 2012 (Action on Smoking and Health, 2014). I also further identified that willingness to try an e-cigarette is strongly linked to use susceptibility in the next year, for both e-cigarettes and conventional cigarettes. Added to this flavoured e-cigarettes were more favourable to adolescents that unflavoured. I am delighted that this study made a unique contribution to the growing evidence on e-cigarettes and adolescents. Based on my findings I suggest that marketing regulations are strengthened to ban the promotion of flavoured products, but also to stop any potential encouragement of willingness to try e-cigarettes in a vulnerable population. Also with the high levels of awareness I found, I believe it is essential for prevention efforts focused on minimising smoking in youths to educate them about e-cigarette use as a cessation aid for smokers. I am delighted that the awareness component of my research has been accepted for poster presentation at the World Conference on Tobacco or Health, Abu Dhabi in March 2015. Furthermore I am currently in the process of preparing to submit my findings on the

impact of flavoured products and a separate paper on willingness and susceptibility to using e-cigarette and conventional products in adolescents, to the Journal of Adolescent Health and the Journal Psychology of Addictive Behaviours respectively.

The most challenging part of this portfolio was conducting a systematic review. Section B2 (p. 106) contains the high quality systematic review I did on transitioning patients with inflammatory bowel disease from adolescent to adult services. Conducting this review was challenging as I found it difficult at first to find an area of interest where a review was needed, but once I had, it proved a useful process and developed my skills and expertise in evaluating and reviewing research studies. The review was deemed as important as more than 25% of Inflammatory Bowel Disease (IBD) patients are diagnosed before they reach 16 years of age, presenting with more extensive distribution and severity of disease than adult onset of IBD. Given this, the individual disease variability and the lifelong treatment required, successful transition from adolescent to adult services are important to ensure individual treatment is guided and transition takes place causing minimal disruption avoiding stress induced recurrence. Currently, successfully transitioning patients with IBD from adolescent to adult services is an inconsistent process, which spurred the need for this review. The review included a comprehensive and systematic assessment of research carried out in a range of databases, in addition to a hand search of other literature. In total six studies were included and section B2 (p. 106) of this portfolio clearly documents this process. It also articulates what the current findings illustrate and where there is need for further empirical research, as well as documenting suggestions for changes with clinical practice. The details of this systematic review have been prepared for publication and submitted to a peer reviewed international journal called Archives of Disease in Childhood.

Section C (p. 163) of this portfolio demonstrates the other skills which I developed over the two years in order to become a competent Health Psychologist, including how I developed as a reflective practitioner, which can be found in section C1 (p. 164). Section C2 (p. 179) details an innovative and creative behaviour change intervention which I developed, delivered and evaluated to support a mass media government led intervention. The intervention focused on preparing GPs for a regional level campaign to improve awareness of the symptoms of ovarian cancer to the general public and urged women to visit their GP. Preparation was defined as GPs having a comprehensive understanding of the signs and symptoms of ovarian cancer and the diagnostic pathway, achieved through the completion of an online learning module. Section C2 (p. 179) will clearly detail in the form of a case study how I developed, delivered and analysed this intervention and the recommended outcomes. I feel that behaviour change interventions is a competency that I found myself thriving and enjoyed the most and over the course of the two years I have been involved in the development, delivery and evaluation of a wide range of interventions, beyond what is documented in this portfolio.

The competency I feel I developed in the most is consultancy, section C3 (p. 200) will illustrate one consultancy project where I developed and tested the materials needed to conduct semi-structured

interviews in order to explore line managers health and wellbeing training needs in the railway industry. My development in consultancy skills was achieved by conducting a number of consultancy projects of various scales at my places of work and with external organisations. Several opportunities arose within my roles, however networking outside of the workplace with like minded individuals led to external opportunities beyond the one illustrated in this portfolio. These include being the lead author on an update systematic review evaluating follow-up strategies for patients with epithelial ovarian cancer following completion of their primary treatment. I also delivered workshops on transitioning into adolescence for secondary school students, which enabled me to demonstrate my teaching and training skills.

Teaching and training is a competency I feel I sit most naturally in and throughout the course of the doctorate I delivered a number of teaching and training sessions. I had the opportunity to impart health psychology expertise across a number of applied settings and to a range of audiences. Throughout my training I have taught a range of audiences including students from secondary school to post graduate, a range of health professionals and the general public. Each teaching and training opportunity has been adapted to meet the needs of different groups being taught and improved my skills at facilitating discussion between participants when engaging in group work. Attending teaching and training workshops has also been beneficial in terms of improving my training and teaching style. Additionally, receiving feedback from participants on the training courses, fellow trainee health psychologists and work colleagues improved my confidence in being able to deliver to a wide variety of audiences. The teaching and training case study in section C4 (p. 272) of this portfolio focuses on one example of where I planned, designed and delivered the MSc Health Psychology lecture, Diversity and Health Promotion, as part of the module Context and Applications of Health Psychology at London Metropolitan University. This case study is also supported by a 10 minute DVD which illustrates this.

The competencies gained throughout the training have equipped me with the skills to practice as a health psychologist and the training overall has proven to be a proactive learning experience. I have had countless opportunities to grow my confidence as a health psychologist and have engaged in continued professional development throughout in a range of ways and will continue to do so. In conclusion, this portfolio has shown the learning process of becoming a health psychologist by completing all the competencies in the areas of teaching and training, research, consultancy and developing and evaluating innovative and creative interventions to elicit behaviour change. I feel much more confident and competent as someone who has transferable skills to apply health psychology skills and knowledge into public health practice. Furthermore, having acquired the competencies to practice as a qualified health psychologist and upon approval of completion of my Professional Doctorate, I endeavour to seek opportunities as a consultant health psychologist.

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SECTION B

RESEARCH COMPETENCY

SECTION B1

RESEARCH THESIS

3.0 RESEARCH

ADOLESCENT'S VIEWS OF THE ELECTRONIC CIGARETTE:

A NEW GATEWAY TO ADDICTION?

CONTENTS

ABSTRACT

BACKGROUND: In the UK alone it is estimated that there are 2.1 million adult electronic cigarette (e-cigarette) users (Action on Smoking and Health, 2014). Introduced to the UK in 2006, e-cigarette use has grown rapidly from 700,000 users in 2012 (Kmietowicz, 2014). Given that smoking initiation begins for the most part during adolescence, it is debatable as to whether the e-cigarette could be a gateway into addiction for adolescent non-smokers. This study examined awareness and use of the e-cigarette amongst adolescents, exploring factors that could lead to willingness to try the e-cigarette and susceptibility to smoking conventional cigarettes. **METHOD:** Using a between-participants survey design, power analysis calculated a sample size of at least 103 for medium effect. Exceeding this, 256 adolescent pupils aged 16 to 19 years consented to take part in the study. Survey data was collected in November 2013, during a series of 45 minute workshops held during school time. Data was analysed using chi-squared analysis and hierarchical multiple regression. **RESULTS:** Nearly all participants had heard of the e-cigarette (94.5%), with friends/family (49.2%) being the most frequently named source of information, followed by television (35.2%). Of the sample 14.5% had used an e-cigarette. Participants were more willing to try flavoured as opposed to the unflavoured version. Smoking status significantly predicted over a third of the variance of willingness to try an e-cigarette ($F(1,254) = 141.81$, $p < .05$) and a further 7.8% of the variance was significantly predicted by a positive prototype of a smoker and a negative prototype of an e-cigarette user (R^2 change $= .078$, $F(8,246) = 4.27$, $p < 0.05$). Willingness to try an e-cigarette was a significant predictor of susceptibility to use of an e-cigarette in the next year ($F(1,253) = 174.71$, $p < .05$) and smoking in the next year, in non-smokers ($F(1,190) = 60.34$, $p < .05$). **CONCLUSION:** Findings illustrated high levels of e-cigarette awareness among adolescents in a London, UK population. Use, whilst at low levels, had increased from the 10% reported in 2012 by Action on Smoking and Health (2014). Willingness to try an e-cigarette was associated with use susceptibility in the next year for both e-cigarettes and conventional cigarettes. This could be interpreted as a gateway effect, in terms of adolescents inclined to use e-cigarettes and then switch to conventional cigarettes (Bell and Keane, 2014). Future research using longitudinal methodologies would enable researchers to track the trend in e-cigarette use over time, observing whether e-cigarettes are truly serving as a gateway to addiction for other forms of nicotine products. Furthermore, prevention efforts to minimise smoking in youths should educate them about e-cigarette use as a cessation aid for smokers.

INTRODUCTION

CIGARETTE SMOKING

Smoking tobacco based products such as cigarettes is a lifestyle choice of around one billion people worldwide and a global public health threat, killing nearly six million people a year (World Health Organisation, 2014a). It is the largest avoidable cause of death contributing to the development of many cancers, chronic obstructive pulmonary diseases, cardiovascular diseases and a wide range of other adverse health conditions (World Health Organisation, 2011). If the current smoking trends continue, it is predicted that the annual tobacco related mortality worldwide will be over eight million deaths by 2030 (World Health Organisation, 2014a). With more than 4000 chemicals in second hand smoke, 250 are known to be harmful and cause serious cardiovascular and respiratory diseases (World Health Organisation, 2014a). Comprehensive national smoke free laws protect the health of over one billion non-smokers, enabling them to breathe tobacco smoke free air (World Health Organisation, 2014a) and also created a high degree of stigma to smoking, encouraging many smokers to quit (Bell, McCullough, Salmon and Bell, 2010a; Bell, Salmon, Bowers, Bell and McCullough, 2010b). It is therefore not surprising that the number of people worldwide smoking, coupled with the adverse health consequences of using tobacco, makes smoking an important public health issue which needs to be curbed. Reducing smoking prevalence and preventing never smoked individuals from starting is a major public health concern. The addictive nature of using cigarettes is one of the reasons why so many smokers continue (Hubbard et al, 2005) and makes the field of smoking cessation and prevention an attractive topic for health psychologists.

The addictive nature of cigarettes has been widely studied and it is a complex interplay of pharmacology, learned behaviour, genetics, social and environmental factors as illustrated in the biopsychosocial model, where no one factor is sufficient enough to explain addiction (Carpenter, Wayne and Connolly, 2007). In addition, it is well recognised and accepted that the addictive nature of smoking tobacco based products is partly due to the nicotine in the tobacco (World Health Organisation, 2011). However, although nicotine is the addictive component of tobacco products, it is the toxins and carcinogens in tobacco smoke that cause most of the harm from using tobacco (Hubbard et al, 2005). The addictive effect of nicotine is linked to the release of dopamine in the brain (Benowitz, 2010), however long term nicotine use depresses the ability for the brain to experience pleasure and smokers need greater amounts of nicotine to achieve satisfaction (Epping-Jordan, Watkins, Koob and Markou, 1998). The strength of an individual's smoking addiction can be measured by assessing their smoking dependence, including physical addiction to nicotine in the tobacco (Fagerstrom, 1978). However, despite being a significant component of smoking as an addictive behaviour, the addictive nature of smoking cannot be explained by nicotine alone and the biopsychosocial complexity of developing an addiction must be appreciated (Carpenter et al, 2007).

Although cigarette smoking is a worldwide health concern (World Health Organisation, 2014a), each country drives their public health activities depending on country specific health priorities and needs. In the UK reducing smoking prevalence and preventing never smoked from smoking is a key priority (Public Health England, 2013) and the introduction of the NHS Stop Smoking Services in 1999 aimed to assist smokers to give up their habit and become non-smokers following the public health White Paper, Smoking Kills in 1998 (Department of Health, 1998). The services offer support through a combination of behavioural techniques by trained personnel and licensed medication like Champix or Zyban to support quitting, or Nicotine Replacement Therapies (NRT). Within the service, the initial assessment will assess nicotine addiction using items from the Fagerstrom test for nicotine dependence (Fagerstrom, 1978), which has been widely used in smoking cessation treatment studies. Implemented with the main objective of reduce smoking prevalence, the Stop Smoking Services helped nearly 146,000 people to quit smoking between 2001 and 2011 (Bauld, Bell, McCullough, Richardson and Greaves, 2009). However despite the services' successes, the long term effectiveness of the intensive treatment is remarkably different when compared to short term success, with a 53% quit rate at four weeks which falls to 15% at 1 year, highlighting the number of people that struggle to sustain abstinence long term (Bauld et al, 2009). The current smoking population in the UK is around one in five adults (Office of National Statistics, 2013) and there are evident disparities in the type of people who continue to smoke (Crosier, 2005). Smokers from disadvantaged areas still find it more difficult to stop smoking than their affluent neighbours (Crosier, 2005) and children from a socio-economic disadvantage are more likely to have smoked (Poonawalla, Kendzor, Owen and Caughy, 2014). Research suggests their reduced chances of successfully quitting are related to a number of factors including lack of social support, higher nicotine dependency and factors relating to accessibility of services provided (Roddy, Antoniak, Britton, Molyneux and Lewis, 2006). Population level interventions such as increasing the price of cigarettes and social marketing have been found to spur on quit attempts in areas of deprivation and also reduce high levels of smoking (Hiscock, Bauld, Amos, Fidler and Munato, 2012; Main et al, 2008; Murray, Bauld, Hackshaw and McNeill, 2009). Multidimensional interventions that tackle social and psychological barriers as well as dealing with the physiological addiction are particularly encouraged in this subgroup due to the slow declining smoking prevalence (Murray et al, 2009). Research has found interventions including an element of social support can improve quit rates (Hiscock et al, 2012). Added to this, pharmacy settings have also been successful in reaching a large number of smokers including those from disadvantaged areas (Murray et al, 2009). Subsidised pharmacological products to support quit attempts have increased quit rates and reduced consumption too (Murray et al, 2009).

Another subgroup where smoking prevalence is high is those working in routine and manual occupations (Sheriff and Coleman, 2013). They find it increasingly difficult to quit (Sheriff and Coleman, 2013) and continuing to smoke because of the physical effects of the addiction, but also because of habit, routine and opportunity it provides to socialise in the working environment, such as smoking breaks (Sheriff and Coleman, 2013). Work based cessation activities including flexible drop-in style services should be considered to curb smoking in routine and manual workers

(Murray et al, 2009; Sheriff and Coleman, 2013). Moreover, reconsideration of smokefree legislation so that it applies to routine and manual occupations, as their work environment can be an open air space, could help de-normalise smoking at work (Sheriff and Coleman, 2013).

Supporting those from low income families and those in routine and manual occupations, as well as those that live or work in areas of deprivation, remains an important public health priority but an on-going challenge. Innovative and new smoking cessation interventions are needed particularly for these groups, as there is limited evidence on effective strategies to increase access to cessation for these groups (Murray et al, 2009). The power of addiction also means for some highly dependent smokers that are undergoing treatment for smoking related illnesses, giving up smoking is extremely difficult (Cooley et al, 2009; Stoleman and Jarvis, 1995; Tashkin et al, 2011). Ensuring innovative ways to reduce health inequalities associated with smoking is particularly important for these subgroups (Hiscock et al, 2012; Murray et al, 2009). Of equal importance is smoking prevention for those who have never smoked, particularly with the high vulnerability of smoking in adolescence, an age where smoking initiation for most normally begins (Aldrich et al, 2014). Preventing individuals from smoking in the first place, particularly those in areas of deprivation who find it difficult to quit, will be a positive step to reducing smoking prevalence and smoking related illnesses.

SMOKING IN ADOLESCENCE

Smoking prevention is not easily achievable and the majority of smokers initiate use through experimentation prior to the age of 18 years old and usually in their teens (Aldrich et al, 2014). In the UK, around one in seven 15 year olds are regular smokers, as documented in the UK White Paper Beyond Smoking Kills (Action on Smoking and Health, 2008). However, whilst some are regular smokers, many are also light or infrequent smokers (Bancej, O'Loughlin, Platt, Paradis and Gervais, 2007).

There is very limited evidence demonstrating efficacy of smoking cessation interventions with adolescents (Garrison, Christakis, Ebel, Wiehe and Rivara, 2003) and what does exist has varied effectiveness (Thomas, McLellan and Perera, 2013), with no evidence on the long term effectiveness of such interventions (Bancej et al, 2007; Garrison et al, 2003). Those attempting to quit in adolescence have high levels of smoking relapse, with 34% failing their quit attempt within 1 week, 56% within 1 month and 92% within 1 year (Bancej et al, 2007). Smoking cessation interventions that have proven most effective in adults, have not been studied in adolescents in a controlled manner (Garrison et al, 2003). Improved smoking cessation initiatives in young people are still needed to reduce prevalence in this age group (Bachmann & Brodbeck, 2012). The challenges associated with giving up in adolescence and the scarce availability of successful cessation programmes, highlights the increased importance of preventing young people from starting in the first place. Adolescents are an important subgroup and research aiming to understand the intricacies of when and why people begin smoking in the first place is essential to

trying to curb smoking prevalence. In turn, it can help reduce the number of smoking related illnesses and deaths. Furthermore, understanding why adolescents start smoking may also give light to new methods to improve smoking cessation efforts in the young.

Smoking prevention is therefore an important public health priority, given that most smokers initiate use during adolescence (Aldrich et al, 2014) despite the health consequences associated with smoking (Peto, Lopez, Boreham, Thun and Heath, 1992). In the UK, public health regulation and legislation have been instrumental in helping reduce smoking prevalence. Smoking prevention and education has been embedded in the school curricula since the 1970s (Lynch and Bonnie, 1994), and the implementation of legislation, like increasing the legal age to purchase cigarettes from 16 to 18 years old (Health Act, 2006) and smoke free legislation (Health Act, 2006) have assisted with the reduction in smoking prevalence (Siegel, Albers, Cheng, Biener and Rigotti, 2005). However despite this, much more still needs to be done to reduce smoking prevalence in adolescents and ensure young people do not take up this addictive habit in the first place. The likelihood of smoking increases with age in adolescents. Among 11 year olds fewer than 0.5% are regular smokers, whereas 10% of school pupils are regular smokers by 15 years old (The Information Centre for Health and Social Care, 2013). The current UK health agenda aims to reduce smoking among young people by 2015 to 4% in 11-15 years old and 9% in 16-17 year olds, through improved youth cessation and prevention programs (Action on Smoking and Health, 2008). Understanding why adolescents start smoking in the first place, could help develop strategies to prevent uptake in this group.

Social learning theory posits that attitudes, beliefs and behaviours are learnt through modelling and imitating others (Bandura, 1986) and demonstrates the social processes that influence the initiation of tobacco use (Bektas, Ozturk and Armstrong, 2010). The basic arguments of social learning theory (Bandura, 1986) are people can learn the behaviours of others, where learning is an internal process which leads to or does not lead to change in behaviour. It also posits that people can self regulate their behaviour, where punishment and reward can affect certain behaviour both directly and indirectly. In the current context, curiosity to see what a product is like, friends smoking, rebelling against negative attitudes by someone older or the need to try something new, are some reasons for smoking initiation (Ladapo et al, 2014; O'Bryne, Haddock and Poston, 2002; Okoli, Greaves and Fagyas, 2013). Whereas disapproval held by someone older and parental communication have protective association for future intentions (Ladapo et al, 2014; O'Bryne et al, 2002; Okoli et al, 2013). Developing methods to reduce the uptake of smoking in young people is imperative to improving health as it would result in less adolescents transitioning to adulthood as smokers. It is therefore important to prevent never smoking youths from being susceptible to smoking and initiating smoking behaviour in the first place.

As most smokers begin smoking in adolescence, youth remain critically important to the long term viability of the tobacco industry and approximately 1 in 8 never smoking adolescents worldwide are susceptible to smoking through tobacco industry promotion (Veeranki, Mamudu, Anderson and

Zheng, 2014). Research has demonstrated the link between tobacco marketing and smoking initiation from as early as 1967 (Pierce, Lee and Gilpin, 1994). For instance, tobacco advertising campaigns targeting women, were associated with a major increase in smoking uptake that was specific to girls younger than the legal age for purchasing cigarettes (Pierce et al, 1994). More recently, a study showed 12% of 15 - 17 year olds were exposed to tobacco marketing and those exposed were more likely to smoke (Soneji, Ambrose, Lee, Sargent and Tanski, 2014).

Added to this, indirect advertising, like exposure to smoking in movies is linked to smoking initiation among adolescents, with stronger association in adolescents with non-smoking parents than in those whose parents smoked (Sargent, Beach, Ahrens, Tickle and Todd, 2003). Moreover, the use of movie product placement as a tobacco marketing strategy, with movie stars like Brad Pitt, Sandra Bullock and Leonardo DiCaprio using particular branded products, sometimes in PG-13 certificate movies, significantly increased the risk of future smoking among adolescents' girls who had never smoked (Distefan, Pierce and Gilpin, 2004). Additionally, research has shown tobacco packaging strongly influences perception of risk, brand appeal and interest in trying tobacco products and may promote false health beliefs (Czoli and Hammond, 2014). Image stereotypes like sexy and stylish are more likely to be associated with smoking susceptibility (McCool, Cameron and Petrie, 2013) and young adults that reject negative labels attached to smoking are more likely to smoke (Dietz, Sly, Lee, Arheart and McClure, 2013). This has led to current proposals of plain packaging to help prevent smoking in youths (Moodie et al, 2012).

Echoing the basic arguments of the social learning theory (Bandura, 1986), influences from peers and family play a significant role in influencing adolescent smoking (Kobus, 2003; Ladapo et al, 2014; Lenney and Enderby, 2008). In addition, exposure to parental or peer smoking, second-hand smoke and tobacco industry promotion has also been associated with increasing smoking susceptibility in adolescents (Engels, Knibbe, Vries, Drop and van Breukelen, 2006; Gilman, et al, 2009; Selya, Dierker, Rose, Hedeker and Mermelstein, 2012; Thomas, Baker and Lorenzetti, 2008; Valente, Unger and Johnson, 2005; Veeranki et al, 2014). Potentially creating a perception that smoking is socially acceptable, parental influence is a factor that could lead to smoking initiation (Veeeranki et al, 2014). However, being a child of a former smoker does not eradicate the effects of parental modelling (Jackson and Henniksen, 1997). Added to this, popularity has also been a factor associated with increased smoking susceptibility (Alexander, Piazza, Mekos and Valente, 2001; Valente et al, 2005) and the onset of smoking initiation has been found to be influenced if friends smoked (Chassin, Presson, Sherman, Montello and McGrew, 1986; Flay et al, 1994; Ladapo et al, 2014). A non-modifiable factor, gender, could be another aspect that influences smoking susceptibility in adolescents (Okoli et al, 2013; Urberg, Degirmencioglu and Pilgrim, 1997; Veeranki et al 2014). Should this be the case, prevention initiatives should be tailored to overcome these differences. A recent study examining gender differences and smoking initiation, found that boys were more susceptible to smoking than girls (Veeranki et al 2014), with boys initiating smoking at a lower age than girls (Okoli et al, 2013). Earlier research found that boys were more influenced to smoke by their best friend than girls (Urberg et al 1997) and a recent review also

demonstrated gender differences in smoking initiation, with girls obtaining their first cigarette from a family member and boys initiation was more likely to take place at school (Okoli et al, 2013).

Given that smoking initiation begins for the most part in adolescence and that an adolescent's decision to start smoking is influenced by social learning, amongst other factors such as personality, sensation seeking, risk perception and acceptance (Burt, Dinh, Peterson and Sarason, 2000; Harakeh, Scholte, de Vries and Engels, 2006; Martin et al, 2002) to name a few, prevention efforts for adults must consider their impact on adolescents, particularly modelling of behaviours that may make smoking seem acceptable. The recent development of the electronic cigarette (e-cigarettes), which are battery powered electronic nicotine delivery systems that convert nicotine into a vapour that can be inhaled, have caused much discussion as they potentially pose both a threat and benefit to public health. This innovative device may have the potential to reduce smoking prevalence, particularly in those sub groups which find it difficult to stop such as low income families and routine and manual works (Crosier, 2005; Sheriff and Coleman, 2013). However, these new devices are of public health concern for adolescents, an age group where smoking initiation takes place and modelling has a major impact, due to their close resemblance to tobacco cigarettes. In the adult population e-cigarettes are mainly being used for cessation purposes. However, despite this, potential modelling through social learning has led to fears that e-cigarettes could act as a gateway to addiction in never smokers and could glamorise or normalise smoking, or on the contrary deter children from smoking tobacco products in the first place (Choi, Fabian, Mottey, Corbett and Forster, 2012; Grana, 2013). Fear that a product which mimics the effects of smoking and challenges legislations like smoke-free laws and marketing regulations associated with traditional cigarettes, is a controversial topic, particularly as the impact of e-cigarettes on teenagers, an age when smoking initiation happens and modelling of behaviour often occurs, is yet to be defined conclusively.

THE E-CIGARETTE

The introduction of e-cigarettes, has led to a number of people choosing this product to assist them in stopping smoking (Brown et al, 2014b; Bullen et al, 2010, Caponnetto, Polosa, Russo, Leotta and Campagna, 2011; Chapman and Wu, 2014; Etter, 2010; Etter and Bullen, 2011; Foulds, Veldheer and Berg, 2011; Goniewicz, Lingas and Hajek, 2013; Hummel et al, 2015; Kosmider, Knysak, Goniewicz and Sobczak, 2012; McQueen, Tower and Sumner, 2011; Siegel, Tanwar and Wood, 2011;;), Popularity has surpassed that of NRT (Ayers, Ribisl and Brownstein, 2011) and 95% of UK Stop Smoking Service practitioners reported that their clients were using them (Beard, Brose, Brown, West and McEwen, 2014). E-cigarettes are an innovative concept and the invention of e-cigarettes can be dated back to 1963 when an American Engineer filed a patent for a device that produced a nicotine-containing steam (Gilbert, 1965), however this device was never commercialised. Following this, a Chinese pharmacist (Lik, 2003) developed the modern e-cigarette in Hong Kong, which first sold in China in 2004 and received its first international patent in 2007 (Electronic Atomization Cigarette Patent Application Publication, 2007), and then exported

by the Ruyan company. In Europe and the US the first e-cigarette was introduced in 2006 (Noel, Rees and Connolly, 2011).

Most e-cigarettes resemble a cigarette, cigar or pen, but do not contain tobacco and are composed of three key components, which include a fluid filled cartridge, an atomizer and a battery. The fluid used to fill the cartridge is referred to as e-liquid and contains propylene glycol or glycerol, flavours, additives and in some instances nicotine. The atomizer is the heating element that produces the vapour from the cartridge and is activated by a switch or button on the e-cigarette or pneumatically. The battery powers the device and in some devices it houses an LED (Light Emitting Diode) indication to signal activation with each puff. The original products, which still exist today are known as first generation products and are one or two piece devices. The battery, atomizer and cartridge are combined, or the cartridge and the atomizer form a single component called the customizer and the battery is separate. The first generation products are available as disposables or rechargeable and sometimes in packs that resemble cigarette packaging. These are the most commonly seen and often used by those new to e-cigarette products (Farsalino, Romagna, Tsiapras, Kyrzopoulos and Voudris, 2014; McQueen et al, 2011).

The later developed e-cigarette devices are known as second generation products and often do not resemble cigarettes. They are larger, about the size of a conventional fountain pen, where the batteries can be combined with various cartridges changing flavours and strengths. These are predominately used by experienced e-cigarette users that are moving on from using first generation products (Dawkins, Turner, Roberts and Soar, 2013; McQueen et al, 2011). Third generation products are also know as modified e-cigarettes or mods and have the functionality of the second generation products, in addition to being modified or personalised for the user. With numerous product options including the addition of second and third generation e-cigarettes there is a large range of consumer choice (Ayers et al, 2011; Brown and Cheng, 2014). In 2014 there were 466 brands with reported spends globally in 2013 of US$3 billion (World Health Organisation, 2014b).

However coupled with consumer choice, is a fragmented e-cigarette market and products are sold under a variety of brand names and through a range of avenues including the internet, convenience stores and supermarkets to name a few. Originally developed by consumer driven companies, the e-cigarette industry which has grown at a rapid rate and still continues to attract new business, became attractive to all the large tobacco companies, who are now big players in the market (Britton and Bogdanovica, 2014). Interest from tobacco companies is somewhat a concern, as their primary reason for existence is not harm reduction or prevention. More worrying, is the fact that tobacco companies are well known for their use of marketing to entice people into smoking in the first place, with their known history of making smoking appeal to young people through marketing (Soneji et al, 2014). Having tobacco companies operate in a harm reduction field, when they have only ever been part of the problem is an area that needs to be carefully monitored. Up until the developments of e-cigarettes and their associated success, the harm

reduction and prevention field has only ever been occupied by pharmaceutical companies and the public health sector, using NRT, non nicotine medications like Champix and Zyban and behaviour change techniques to help someone to stop smoking (The Health & Social Care Information Centre, 2008). However the potential benefits of the tobacco industry operating in this space must also be appreciated. The tobacco industry could potentially have the power to entice smokers to transfer to these products, which could lead to public health benefit. The level of interest expressed by tobacco companies can be seem through recent market acquisition (Britton and Bogdanovica, 2014). Lorillard Inc makers of Newport tobacco cigarettes acquired Blu e-cigarette Company paying £90 million for the acquisition and later brought Edinburgh based Skycig. Reynolds America makers of Camel have launched e-cigarette brand Vuse, Altria, owners of Phillip Morris (makers of Marlboro and others) launched MarkTen and British American Tobacco have launched the e-cigarette product Vype. British American Tobacco were also the first major tobacco group to buy a British e-cigarette company, purchasing CN creative in December 2012 (Britton and Bogdanovica, 2014).

Knowledge of the tobacco industry investing in harm reduction induces fear that e-cigarettes will re-normalise smoking (Maziak, 2014) and that nicotine containing products like e-cigarettes could become easily available to never smoked adolescents. There is then potential for the tobacco industry to introduce ways to exploit this vulnerable audience to using e-cigarettes, given their history with conventional cigarettes and marketing (Soneji et al, 2014). Lack of medical regulations, means that no pharmaceutical industries have currently entered the market. This is despite some medical and public health communities pushing for e-cigarettes to be regulated as a medical device or drug, like nicotine replacement therapy (Medicines and Healthcare products Regulatory Agency, 2014).

With the rise in product development, there had also been a rise in product use. In the UK alone, it is estimated that there are 2.1 million adult e-cigarettes users (Action on Smoking and Health, 2014), with use growing rapidly from 700,000 in 2012 (Kmietowicz, 2014) and increasingly common in young adults (Ramo, Young-Wolff and Prochaska, 2015). Internationally, studies have found utilisation higher in current and former smokers than never smokers, where users perceive the products as safer than tobacco cigarettes (Brown et al, 2014b; Etter and Bullen, 2011; Giovenco, Lewis and Delnevo, 2014; Harrington et al, 2014; Hummel et al, 2015; Pearson, Richardson, Niaura, Vallone and Abrams, 2012; Ruther et al, 2014; Tan and Bigman, 2014;). Moreover, a large proportion of users are men (Etter, 2010; Etter and Bullen, 2011; Foulds et al, 2011; Goniewicz et al, 2013; Ruther et al, 2014; Siegel et al, 2011) and from a higher socio-economic status (Brown et al, 2014b; Hummel et al, 2015). Puffing patterns such as frequency, strength and duration can vary greatly among e-cigarette users and a survey of daily users showed that on average they take 120 - 150 puffs per day, use 5 refills per day and use the e-cigarette for several months (Etter, 2010; Etter and Bullen, 2011). Vapour production and dosing of nicotine in the vapour varies across brands and models, but also between products within a given model (Trtchounian and Talbot, 2010). Considering themselves as 'vaperers' rather than smokers, if they

are a daily user, and no longer using conventional cigarettes (McQueen et al, 2011), vaperers have been known to build a community presence as a group in their own right (Bell and Keane, 2012). There are evident vaping communities and subcultures with regional festivals, meet-ups and the availability of magazines and forums dedicated to e-cigarettes, where individuals can share product reviews and experiences of e-cigarettes (Bell and Keane, 2012).

As well as use rising, general awareness of the e-cigarette is also rapidly increasing when assessed in the adult population. An international study including UK, USA, Canada and Australia found 46.6% of current and former smokers were aware of e-cigarettes, with awareness higher among younger, non minority ethnic smokers (Adkison et al, 2013). Moreover, a U.S based study found that awareness of e-cigarettes measured through a mail-in survey increased from 16.4% in 2009 to 32.2% in 2010 (Regan, Promoff, Dube and Arrazola, 2013). More recently, a population study conducted in the Netherlands reported awareness figures of 91.4% in 2014 (Hummel et al, 2015). The impact of the rapid rise of awareness needs to be assessed within the adolescent population to determine whether the close resemblance of e-cigarettes to conventional cigarettes is clouding an adolescent's perception of smoking and renormalizing smoking in adolescents.

Despite the uncertainty of the impact of the rise in use and awareness of e-cigarettes in the adult population on adolescents, the rise in the popularity in adults is likely to be associated with a number of positive aspects associated with the product, both perceived and actual.
There are an increasing number of studies which suggest e-cigarettes provide effective nicotine delivery and are being used for cessation purposes or to reduce tobacco intake (Brown et al, 2014b; Bullen et al, 2010, Caponnetto et al, 2011; Chapman and Wu, 2014; Etter, 2010; Etter and Bullen, 2011; Foulds et al, 2011; Goniewicz et al, 2013; Hummel et al, 2015; Kosmider et al, 2012; Lechner et al, 2014; McQueen et al, 2011; Siegel et al, 2011). Users are more likely to report continued abstinence than those who use NRT (Brown, Beard, Kotz, Michie and West, 2014a), which may be associated with the fact that users are often still vaping one year after use, with the number of puffs unchanged between baseline and one year (Etter and Bullen, 2014). This is different to NRT, which in the UK is recommended for a maximum of 12 weeks (NHS, 2014).

Moreover, when the e-cigarette was compared with the nicotine replacement inhalator, a product which also allows the user to continue with the hand to mouth action associated with smoking, satisfaction and perceived benefits of the e-cigarette was higher than that of the nicotine replacement inhalator (Steinberg et al, 2014). The study reported 76% of e-cigarette users preferred to use the product for a quit attempt compared to 24% of inhalator users (Steinberg et al, 2014). It has also been reported that e-cigarettes are successful in reducing nicotine withdrawal, enhancing working memory performance (Dawkins, Turner, Hasna and Soar, 2012), improving outcomes in asthmatic smokers (Polosa et al, 2014) and even reducing tobacco intake in those not wanting to quit smoking (Polosa et al, 2011). Moreover, users report the device as helping them avoid relapse to traditional cigarettes and reduce consumption or relive withdrawal symptoms in places where there are smoking restrictions (Adkison et al, 2013; Caponnetto et al, 2011; Etter,

2010; Etter and Bullen, 2011). Perceived success is associated with social benefits, where the e-cigarette has the ability to become part of the individuals identity, fit in with everyday life and aid smoking cessation (Barbeau, Burda and Seigel, 2013) as well as the cost of e-cigarettes being substantially cheaper than smoking (Etter and Bullen, 2011; Hummel et al, 2015), as they are not taxed as tobacco products. Perceived health benefits to e-cigarette users include improved respiratory symptoms, physical fitness and improved sense of smell and taste (Etter, 2012; Heavner, Dunworth, Bergen, Nissen and Phillips, 2009), although unwanted side effects of the e-cigarette include dry throat and mouth and a burning sensation of the throat (Etter, 2010; Farsalino et al, 2014).

Given that the combustible nature of a tobacco cigarette releases more than 4000 chemicals when smoked, combined with the fact that smoking kills more than 5 million people worldwide each year through direct tobacco use and tobacco smoke (World Health Organisation, 2014a), e-cigarettes are considered a safer alternative (Borland and Gray, 2011; Cahn and Siegel, 2011; Etter, 2010; Etter and Bullen, 2011; Hummel et al, 2015; Miura et al, 2011). The non-combustible nature of the e-cigarette mean that fewer toxins are produced, however due to e-cigarettes being relatively new, more research is needed so the exact harm of this products can be quantified. It can however be assumed that they produce significantly less toxins than tobacco cigarettes and are therefore a safer alternative than smoking. The rapid increase of smokers using these products could potentially be saving the lives of many and if the quality could be improved even further to better compete with conventional cigarettes the e-cigarette has the potential to encourage more people to switch because of its strong appeal to mimicking the cigarette (Dautzenberg and Dautzenberg, 2014; Fagerstrom and Bridgeman, 2014). However, despite the positive effects associated with the e-cigarette, including its ability to potentially reduce the number of smoking related diseases if all smokers turned to such product, there are a number of concerns associated with e-cigarettes as demonstrated in a recent systematic review (Pisinger and Dossing, 2014).

Some concerns have been raised regarding the e-liquids, which are used on a refillable basis in some products and the fact that the liquid solution may contain up to 70 ingredients (Etter, 2012). In addition most manufacturers do not disclose the composition of the fluid or the manufacturing process (Etter, 2012; Pisinger and Dossing, 2014) and when disclosed, nicotine concentration labelling has been found to be inaccurate (Davis et al, 2014; Pisinger and Dossing, 2014). This poses great challenges as it becomes difficult to assess the quality and safety of liquids or provide suitable product labelling for the e-liquids. This presents as a danger to those that may use them and has led to the Medicines and Healthcare products Regulatory Agency (MHRA) requiring all imported e-liquids to use nicotine that conforms to European Pharmacopeia Reference Standards. However there is currently no regulation for the manufacturing of e-liquids in any country, which makes it very difficult to have a clear understanding of the safety and quality of these liquids.

Further concerns regarding e-liquids include the danger associated with their high level of toxicity (Bahl et al, 2012), where the product should not come into contact with the skin (Bahl et al, 2012).

The action of re-filling e-cigarettes allows for the potential hazard of toxic liquid nicotine spilling onto the skin. The level of danger regarding using e-liquids can also cause harm in pregnancy, where one study found that cells from embryos and newborns were more sensitive to the e-liquids than adult cells (Bahl et al, 2012). There are also safety concerns associated with the device where there is the potential for products to be faulty and deficient (Bell and Keane, 2012; Etter, 2012). Moreover, there are reports of non standard use of the e-cigarette, for example the use of marijuana in liquid or wax forms in the device, in order to use the drug in public without the fear of detection (Greig, 2013). This has lead to the fear that some users could potentially graduate from using the product for nicotine, to using it for marijuana (Akre and Suris, 2015; Grana, 2013). There have also been anecdotal reports about health concerns from e-cigarette users, including serious complaints of hospitalisation for illnesses such as pneumonia, congestive heart failure, disorientation, seizure and hypotension to name a few (Chen, 2013). As well as other e-cigarette health complaints such as headaches, chest pain, dizziness, sore throat, shortness of breath, abdominal pain, blurry vision, and tiredness (Chen, 2013). However it must be appreciated that some of these reports could be related to pre-existing conditions or due to other causes not reported. (Chen, 2013).

There has also been media reports of e-cigarettes causing fires (Levy, 2014) and exploding (Richardson, 2014), plus the number of e-cigarette related reports received by poison centres are increasing (Durmowicz, 2014), which also contributes to the safety concerns around the products.

Furthermore, e-cigarettes are not currently included in the smoke free law (Health Act, 2006), but concerns regarding second hand vapour and normalising smoking tobacco stem from the fact that vapour produced by e-cigarettes can be seen and smelt. Some business premises, schools, hospitals and transportation firms have made the decision to extend their smoke free policies to include e-cigarettes, in order to prevent them being used in their own premises. Studies have examined emission from e-cigarettes and found a concentration of several substances in the air rises, although not to the level of tobacco smoke (Cervellati et al, 2014; McAuley, Hopke, Zhao and Babaian, 2012; Pisinger and Dossing, 2014; Schripp, Markewitz, Uhde and Salthammer, 2013). It has been suggested that e-cigarette users should avoid smoking in closed environments as non-smokers and adolescents should not be exposed to these substances, as e-cigarette use in public places undermines smoke-free legislation (Cobb, Byron, Abrams and Shields, 2010; Henningfield and Zaatari, 2010) due to the visible appearance of vapour. Moreover, it has been suggested that adolescents and their parents be warned about the risks and undesirable effects of e-cigarettes to reduce the likelihood of use in young people (Johnson and Pennington, 2014).

Other concerns revolve around the varying e-liquid flavours, with popular e-cigarette flavours being tobacco, mint-menthol, fruit, coffee, vanilla and chocolate, in that order (Etter and Bullen, 2011). The development of favoured products raises concerns that they may be appealing to adolescents (Cobb et al, 2010), as seen in the case of flavoured alcoholic drinks, alcopops, targeted at young people (Hastings, Anderson, Cooke and Ross, 2005; Jones and Reis, 2012). Flavours mask the

taste of tobacco, which could be appealing to youths. Supporting this notion, studies have found that flavoured tobacco cigars and cigarettes were used by two fifths of middle and high school students (King, Alam, Promoff, Arrazola and Dube, 2013; King, Tynan, Dube and Arrazola, 2014). Moreover, flavoured cigarettes elicited higher positive expectancies than non flavoured counterparts across all groups including non-smokers (Ashare et al, 2007). The use of flavoured e-cigarettes in the adolescent population has been researched in the US, however no difference was found between willingness to try a flavour e-cigarette versus an unflavoured e-cigarette, however the researchers did highlight that failure to specify unflavoured in the survey may have skewed the results of the study (Pepper et al, 2013b).

Interestingly, despite the negative effects and implications associated with e-cigarettes, 95% of e-cigarette retail websites make explicit or implicit health related claims (Grana and Ling, 2014). Also their short term existence means there is no adequate data on long term effects of these popular devices (Callahan-Lyon, 2014). There remains a lack of evidence on efficacy of e-cigarettes and their emission, which has led to the World Health Organisation advising they should not be used in the first instance (World Health Organisation, 2008; World Health Organisation, 2014b). Moreover, they continue to explain that this should not change unless e-cigarettes are deemed safe, effective and of acceptable quality by a regulatory body and within a regulatory framework (World Health Organisation, 2014b). So despite some e-cigarette users using the products to quit smoking or reduce their smoking, e-cigarettes are not being manufactured like medicines and are therefore not scrutinised to be as safe as nicotine medicines (Etter, 2013). Therefore, it is not surprising that in light of safety concerns and implications associated with e-cigarettes, there has been discussions about the use, sale and advertising of e-cigarettes (Andrade, Hastings, Angus, Dixon and Purves, 2013; Electronic Cigarette Industry Trade Association, 2013; Hajek, 2012; The Advisor, 2013; Trading Standards Institute, 2014).

In the UK, it is currently legal to use, sell and advertise e-cigarettes, which are marketed as an alternative to smoking and governed by trading standards bodies. This means products must come with appropriate toxic label warnings, in line with The Chemicals (Hazard Information & Packaging for Supply) Regulations 2002. The regulation on the age of sale of e-cigarettes and other nicotine containing products prohibits sale to those under the age of 18 years, however despite the concerns regarding e-cigarettes and the dangers associated with access and use, there are currently no restrictions placed on the age at which these products can be sold. This is very different to conventional tobacco products where restriction has been in place for under 18's since 2007 (The Children and Young Persons (Sale of Tobacco etc.) Order, 2007). This variation between regulation and restrictions between cigarettes and e-cigarettes has caused confusion at which the age products can be supplied (Trading Standards Institute, 2014). Around 40% of under 18s have been able to purchase these products at a range of business premises, despite some products carrying an age warning on the packaging that they should not be sold to under 18's (Trading Standards Institute, 2014). It has been suggested that restrictions on sale in the UK are

said to be imminent and likely to change with new children and family regulation (Action on Smoking and Health, 2013).

Other regulation uncertainties regarding e-cigarettes include them being regulated as a medical device, medicinal product or consumer product and the lack of evidence regarding the efficacy of e-cigarettes makes it difficult to distinguish whether a medical claim can accompany them (Syx, 2014). However, if e-cigarettes are a suitable cessation aid, than regulating them as a medical device or product could bring the cost down for those that may not be able to access them, but also it would ensure products are being developed safely and effectively. On the other hand, implementing regulation associated with a suitable medical claim, need to consider the cost of marketing authorisation via a medical licence, which could stifle innovation and reduce the current product offerings on the market (Hajek, 2012). The fact that regulation could produce a negative effect on product use and availability in former or current smokers, presents as a potential problem. The e-cigarette industry has been booming and attractive to former and current smokers and if safe and effective it has the potential to assist with smoking related public health challenges.

In light of this and following a three year consultation process the Medicines and Healthcare products Regulatory Agency (Medicines and Healthcare products Regulatory Agency, 2013) have announced its intention to regulate nicotine containing products as medicines and that all nicotine containing e-cigarettes, regardless of the level of nicotine, should be considered pharmaceuticals (Syx, 2014). They have already received a number of applications for an e-cigarette licence, including applications from big tobacco companies. However, until the law is in place, e- cigarettes that are currently on the market will not be required to obtain a medicine licence until the proposal in the European Commission's revised Tobacco Products Directive is agreed and implemented. The revised Directive is expected to come into effect in 2016. There are some concerns that medicine regulation would slow down innovation of products and potentially come at the cost of public health improvements (Hajek, 2012). Given the cost to apply for a medicine licence, small companies would be driven out of the industry and major players left in the industry would potentially be the big tobacco Companies. This drives fear into public health professionals due to their reputation in the industry and their main focus not being harm reduction (Maziak, 2014). But on the contrary if they are not medically regulated safety concerns may still exist, also they may be difficult to be obtained by those who need them due to associated costs, particularly those where current cessation interventions are unable to help. Concerns about the proposed regulation in the UK have been voiced by the Electronic Cigarette Industry Trade Association (ECITA), a regulatory body in the European Union for e-cigarettes, that e-cigarettes would lose their appeal to consumers if it was supported as a product for medicinal purpose as the range of choice would be reduced as products would be altered to achieve market authorisation (Electronic Cigarette Industry Trade Association, 2013).

Supporting these proposed changes in the UK are the National Institute for Health and Care Excellence (National Institute for Health and Care Excellence, 2013). They issued evidence-based

guidance on tobacco harm reduction that recommends that whilst quitting smoking is the best option, the use of licenced nicotine containing products, not including tobacco, is supported to help smokers not currently able to quit or cut down and as a substitute for smoking, which can provide benefits to those that find it difficult to quit smoking (Phillips, 2009). Furthermore, in the Department of Health Tobacco Plan (Department of Health, 2011) there was an expressed commitment to co-ordinate, through the MHRA, scientific and market research on the use of nicotine-containing products, such as e-cigarettes to inform decisions about the most effective and proportionate form of regulation.

In addition to legislation and regulation regarding e-cigarettes, marketing and advertising is also a source of concern, particularly as they threaten to reverse successful long standing public health campaigns and de-normalise smoking (Fairchild, Bayer and Colgrove, 2014). This presents a particular threat to the never smoked adolescent group, as it has the potential to make a nicotine product cool and attractive. The advertising of tobacco was banned in 2005 by both the European Union and the World Health Organisation as the advertising of tobacco persuaded non-smokers, especially adolescents, to start smoking and dissuaded smokers from quitting (Action on Smoking and Health, 2006), which effectively was claiming the lives of people. E-cigarettes are not marketed as a smoking cessation aid due to lack of robust evidence to support cessation claims, but rather advertised for enjoyment, for use in smoke-free places and/or a safer alternative to cigarettes. Although aiming to target smokers, there is cause for concern that these products will appeal to those who have never smoked, including adolescents (Choi et al, 2012; Grana, 2013), but this is yet to be tested.

The Advertising Standards Authority (ASA) banned the first four TV advertisements for e-cigarettes to be screened in the UK in September 2013 (Andrade, Hastings, Angus, Dixon and Purves, 2013). The ASA ruled that the TV adverts were misleading, not clearly stating what was being advertised and that the products contain nicotine (Andrade et al, 2013). This was concerning, particularly as supporting evidence from the US Campaign for Tobacco Free Kids compared conventional US cigarette adverts of the 1940s and 50s to the modern e-cigarette adverts and found similarities (The Advisor, 2013). This suggests the likelihood of recent marketing of e-cigarettes having similar consequences of original tobacco marketing, which provided persuasive encouragement to start smoking. Following this and more recently in October 2014 the Committee of Advertising Practice, who write and maintain UK advertising rules which are enforced by the ASA, announced that e-cigarettes can be shown in UK TV adverts from November 10th, 2014. The ruling did have some stipulations, which included adverts must not target under 18s or non-smokers, must not claim to be safer or healthier that smoking tobacco and should not make any health claims without approval from the MHRA.

Outside of TV advertising, e-cigarette advertising has extended to social media, online advertising, newspapers, bus stops, internet forums and are being seen on British TV soaps, chat shows and the news, making e-cigarettes more identifiable by the general public, including adolescents. Other

marketing tactics include products receiving celebrity endorsement by Leonardo DiCaprio and Britney Spears to name a few and have been used in a music video by Lily Allen, which is also of concern as these celebrities are well known favourites to young people (Bauld, Angus, and de Andrade, 2014). So despite changes in advertising laws, e-cigarette marketing may have the potential to influence the development of positive attitudes towards smoking or not smoking. The impact of the rapid growth of the e-cigarette market and its ability to advertise in a variety of forms needs to be researched in the adolescent population. This is because advertising and popularity of e-cigarettes is happening at an unprecedented rate and if the impact of marketing produces similar results like tobacco marketing once did, it could lead to potential harm by coercing young people into trying the products or smoking regular cigarettes. Exposure to e-cigarette advertisements in the US increased by 256% from 2011 to 2013 (Duke et al, 2014), with expenditure highest in magazines and on TV (Kim, Arnold and Makarenko, 2014).

Therefore, although e-cigarettes have a role to play in tobacco harm reduction (Foulds et al, 2011), there needs to be scrutiny on advertising as to ensure e-cigarettes do not appeal to adolescents, given that smoking initiation often begins in adolescents and their beliefs and actions are influenced by adults (O'Bryne et al, 2002; Ladapo et al, 2014; Okoli et al, 2013). When examining e-cigarette websites, 73% had a youthful appeal included images or claims of modernity (Grana and Ling, 2014) leading to concerns about the audience they are attempting to market to and the effects of this should be monitored and considered. Major players in the e-cigarette industry are big tobacco companies (Britton and Bogdanovica, 2014), whose main focus is not harm reduction or prevention. This is particularly important as studies have found exposure to anti-smoking media messages were associated with increased susceptibility to smoking among never-smoking youths (Veeranki et al, 2014), which might be due to interference of tobacco companies (Farrelly, Davis, Haviland, Messeri and Healton, 2005). It is therefore important to deliver anti-smoking messages through media without interference by tobacco companies (Veeranki et al, 2014). Moreover, research investigating the effects of e-cigarette advertising on non-smokers interested in trying conventional cigarettes, found interest higher in adverts with messages about differences between regular cigarettes and e-cigarettes than adverts showing product use (Pepper, Emery, Ribisl, Southwell and Brewer, 2014). This presents as a concern particularly if advertising and marketing raises non-smokers risk of susceptibility to smoking tobacco cigarettes.

AWARENESS AND USE OF THE E-CIGARETTE AMOUNG ADOLESCENTS

The impact of the lack of e-cigarette marketing regulation and legislation on awareness and use of e-cigarettes in the adolescent population remains questionable. Research has shown that e-cigarettes are used mainly by both smokers and ex-smokers, but there is little evidence of use in never smoked, in particular adolescents, which despite being low is on the increase (Chapman and Wu, 2014; Durmowicz, 2014). The rapid development of e-cigarettes and associated problems such as concerns around their safety and the variability and attractiveness of flavours, are areas which need to be investigated further, particularly to protect adolescents from finding these

products attractive. Furthermore, research on conventional cigarettes highlights the impact marketing and advertising can have on an adolescent's decision to smoke (Farrelly et al, 2005; Veeranki et al, 2014), suggesting that stricter marketing and advertising laws are needed. Added to this is the fear that exists around the highly addictive nature of nicotine and the close similarities of e-cigarettes with conventional cigarettes in appearance, possibly creating a gateway effect, where one study demonstrated e-cigarette users are more likely to also use alternative tobacco products such as hookah and blunts (marijuana rolled in tobacco) than smokers and never smoked (Camenga et al, 2014b). The gateway effect within e-cigarette literature is where adolescents become addicted to e-cigarettes and then switch to tobacco cigarettes (Bell and Keane, 2012; Grana, 2013). The addictive nature of e-cigarettes, as demonstrated in a study of cotinine levels in e-cigarette users, showed that saliva levels for ex-smokers who did not recently use tobacco or NRT had similar cotinine levels observed in regular smokers and twice as high cotinine levels usually observed in ex-smokers who use nicotine medication, suggesting that e-cigarettes deliver substantial amounts of nicotine (Etter and Bullen, 2011). However, without empirical support that this gateway effect truly exists, it could also be argued that adolescents initiating e-cigarette use rather than smoking conventional cigarettes is a safer alternative in adolescents who are likely to start smoking in the future.

There is a paucity of peer reviewed and published research on e-cigarette use by adolescents, as illustrated in table 1 (p.32-35). However, existing studies reveal the rapid rise of use in under 18s, with <1% use in 2011 (Cho, Shin and Moon 2011) to 17.4% use in 2014, of which 8.3% were never smokers (Kinnunen et al, 2013), which is certainly a cause of concern (Ahern and Mechling, 2014). Furthermore, a recent study documented 17.8% e-cigarette ownership in early adolescents (Pentz et al 2015) and a recent qualitative study reports that for some adolescents the e-cigarette acted as a gateway for them to traditional cigarettes (Akre and Suris, 2015). Research to date on e-cigarettes and adolescents has included a mixture of empirical studies and national surveys that have found awareness of the e-cigarette has grown from 10% in 2008 (Cho et al, 2011) to 85% in 2013 (Kinnunnen et al, 2013), with the highest route for gaining their knowledge was the internet and friends (Cho et al, 2011). In regards to use, smokers use the products more than non-smokers (Dautzenberg et al, 2013; Goniewicz and Zielinska-Danch, 2012; Kinnunen et al, 2013; Pepper, McRee and Gilkey, 2013a; Sutfin, McCoy, Morrell, Hoeppner and Wolfson, 2013), which is similar to the findings in adult studies (Brown et al, 2014b; Etter and Bullen, 2011; Giovenco et al, 2014; Harrington et al, 2014; Pearson et al, 2012; Ruther et al, 2014; Tan and Bigman, 2014). Some studies which investigated trends of use over a time period of 12 - 16 months reported a doubling in use (Camenga et al, 2014a; Corey et al, 2013; Dutra and Glantz, 2014) and experimentation of the e-cigarette was highest in 15 - 19 year olds (Dautzenberg et al, 2013).

Given the similarities between e-cigarettes and conventional cigarettes, it is important to understand use and awareness of e-cigarettes among adolescents. Adolescents are a vulnerable group where smoking initiation for the most part begins (Aldrich et al, 2014). The Social Learning Theory (Bandura, 1986) posits that attitudes, beliefs and behaviours are learnt through modelling

and research has documented the social processes that influence the initiation of tobacco use, with product curiosity, media, friends smoking, rebelling and risk taking being some of the them (Bektas et al, 2010; Distefan et al, 2004; Ladapo et al, 2014; O'Bryne et al, 2002; Okoli et al, 2013; Sargent et al, 2003;). Whether e-cigarette use and awareness increases an adolescent's willingness and/or susceptibility to use e-cigarettes, or worse case, conventional cigarettes, needs to be explored, particularly with the harmful effect smoking cigarettes causes as well as smoking related deaths (World Health Organisation, 2014a).

TABLE 1: PRIMARY STUDIES ON E-CIGARETTES AND ADOLESCENTS

Author, date	Research aim/question	Participants	Year of data of collection	Key findings
Cho et al, 2011	Assess levels of awareness and contact routes to e-cigarettes.	N = 4341 Mean age 14 years (SD = 0.87) Gender: 45.8% boys Smokers: <1%	2008	<1% had tried an e-cigarette. Highest contact route for information on e-cigarettes was the internet (46.4%), followed by friends (27.9%).
Goniewicz and Zielinska-Danch, 2012	Assess awareness of ever and current use of e-cigarettes and perceptions of their safety.	N = 13,250 Age: 15 - 24 years Gender: 54.8% girls Smokers: 34.4%	2010 - 2011	24% e-cigarette use (of which 8% used in past 30 days and 3% were never smokers of which 1% used in past 30 days).
Dautzenberg et al, 2013	Examine concerns that e-cigarettes have become a new product for tobacco initiation.	N = 3409 Age: 12 to 19 years Gender: 49.5% girls Smokers: 12%	2012	8.1% use (of which 33.2% were never smokers and 40.4% were daily smokers). Experimentation rate was 6.4% in 12-14 years, 11.8% in 15 - 18 year and 9% in 17 year olds.
Pepper et al, 2013b	Explore awareness of e-cigarettes and willingness to try them.	N = 228 Age: 11 to 19 years Gender: 100% boys Smokers: 16%	2010 - 2011	<1% had tried e-cigarette; 67% had hear of e-cigarettes; smokers were more willing to try the e-cigarette than non-smokers; non-smokers with negative beliefs about typical smokers were less willing to try e-cigarette.

TABLE 1 (Cont'd): PRIMARY STUDIES ON E-CIGARETTES AND ADOLESCENTS

Author, date	Research aim/question	Participants	Year of data of collection	Key findings
Lee, Grana and Glantz, 2014	Assess the prevalence of e-cigarette use and the relationship between e-cigarette use and current cigarette smoking.	N = 75,643 Age: 13 to 18 Smokers: 8.6%	2011	9.4% ever use (of which, 8% using e-cigarette and conventional cigarette and 1.4% use e-cigarette only) and 4.7% were users in the past 30 days (3.6% dual users and 1.1% e-cigarette only).
Camenga et al, 2014a	Explore trends in use of e-cigarettes among teenagers and young adults.	N = 4766 Smokers: 13.6%	2010 - 2011	Use doubled in 16 months from 0.9% in 2010 to 2.3% in 2011.
Corey et al, 2013	Explore trends in use of e-cigarettes among teenagers and young adults.	Information not provided	2011 and 2012	E-cigarette ever use and recent use doubled among middle and high school students during 2011-2012.
Kinnunen et al, 2013	Assess e-cigarette awareness and use, determinants and source of e-cigarette liquids and exposure to e-cigarette advertising.	N = 3535 Age: 12 - 18 years Smokers: <1%	2013	85.3% awareness, 17.4% tried an e-cigarette, of which 8.3% were never smokers. Awareness and experimentation was higher in boys.

TABLE 1 (Cont'd): PRIMARY STUDIES ON E-CIGARETTES AND ADOLESCENTS

Author, date	Research aim/question	Participants	Year of data of collection	Key findings
Camenga et al, 2014b	Determine whether alternative tobacco product, alcohol and marijuana use differs between adolescents that use e-cigarettes, smokers and never smokers.	N = 1556 (total) 2.4% e-cigarette users 12.4% smokers 85.1% never smoked Age: high school	2010 - 2011	E-cigarette users were more likely that both current smokers and never smokers to report having a blunt (marijuana rolled in tobacco) and hookah in the past 30 days. E-cigarette users did not have an elevated risk of using alcohol or marijuana as compared with current smokers.
Pentz et al, 2015	Examine influences of demographics, parent e-cigarette ownership, peer use, executive function deficits on lifetime e-cigarette, cigarette and alcohol use.	N = 410 Age: 7th grade (mean age 12.4 years) 48.3% female	2013	17.8% owned their own e-cigarette and 28.9% had one or both parents that owned an e-cigarette. Lifetime prevalence was 11% for e-cigarettes, with low socio-economic status and age marginally related to e-cigarette use. Parent e-cigarette ownership was associated with lifetime use of all substances. Adolescents with executive function problems were five times more likely to use the e-cigarette.
Pepper et al, 2013a	Investigate health providers beliefs and attitudes about e-cigarettes for adolescents.	N = 561 100% Health providers	2014	92% had heard of e-cigarette and 11% treated adolescents who had tried the e-cigarette. Providers expressed concerns of the gateway effect in this population.

TABLE 1 (Cont'd): PRIMARY STUDIES ON E-CIGARETTES AND ADOLESCENTS

Author, date	Research aim/question	Participants	Year of data of collection	Key findings
Akre and Suris, 2015	Determine whether e-cigarettes act as a gateway to smoking traditional cigarettes.	N = 42 Age: 16-26 years 45% female 4 focus groups (4 with e-cigarette users, 2 with traditional cigarette users and 1 with non-smokers)	Unknown	Participants expressed a significant threat of the e-cigarette acting as a gateway to traditional cigarette among adolescents. Encouraging factors included a smooth way of starting, an efficient preparation for smoking, young people using them could entice other young people and traditional products were viewed as easier to use than e-cigarettes. The focus groups also expressed a worry over e-cigarettes fashion and popularity, its harmless perception, ease to hide from parents, sweet taste and ease of use in smoke-free areas. Some participants reported the product acted as a gateway for themselves by starting e-cigarette smoking prior to cigarette consumption. Some said the e-cigarette was not a gateway as only smokers would use them and e-cigarettes could keep young people away from traditional products.
Dutra and Glantz (2014)	Assess e-cigarette use and conventional cigarette smoking.	N = 17353 - 22529 Age: middle school and high school	2011 and 2012	E-cigarette use doubled between 2011 and 2012 from 3.1% to 6.5%.
Action on Smoking and Health, 2014	Assess e-cigarette use in children in the UK.	N = 2178 Age: 11 - 18	2013	66% were aware of the e-cigarette but use was low, with 7% of 11-18 year olds had tried it once and 2% more often.

OVERVIEW

The e-cigarette literature gives rise to a multitude of messages which need to be explored further by empirical research, which makes it very difficult to own a position in this field. E-cigarettes were introduced to the UK in 2006 and their rapid growth in use and awareness has made it hard for legislation and research to keep up. Although e-cigarettes could have a place to play in harm reduction as a safer alternative to tobacco smoking, due to their non combustible nature (Borland and Gray, 2011; Cahn and Siegel, 2011; Etter, 2010; Etter and Bullen, 2011; Miura et al, 2011; Hummel et al, 2015), concerns exist around the impact the rapid evolution of the product is having, particularly on never smoked individuals across the generations. Furthermore, although the e-cigarette produces vapour, which appears to look like smoke, its non combustible nature means they can be smoked indoors unlike conventional tobacco products. This gives rise to concerns around its emission, as well as the behavioural impact of using the product indoors. Other concerns include the various flavoured e-cigarettes that are available on the market and their appeal to those that have never smoked, particularly adolescents, as well as anxieties regarding big tobacco companies operating as major players in the field and the ambiguity of their ability to work in a harm reduction capacity. Alongside this is the concerns of the lack of data and research on long term effectiveness, potential health harms and whether the e-cigarette could serve as a gateway to smoking conventional cigarettes. The grey e-cigarette landscape means there are lots of unanswered questions that need exploring with research and no one research project will be able to answer them all. The current study has chosen to take the direction to examine the impact of e-cigarettes in adolescents, an age where smoking initiation commonly happens. Moreover, this is an area where there are concerns being voiced by researchers, health professionals and the public about the potential for e-cigarettes to serve as a gateway, but there remains a paucity of research available.

The present study therefore aims to contribute to the field of health psychology and is the first study of its kind to assess factors in adolescents that influence susceptibility to trying an e-cigarette and smoking conventional cigarettes, particularly in non-smokers. This is of key relevance to public health as nicotine is a highly addictive substance (World Health Organisation, 2011) and it is well documented that smokers initiate use during their teenage years (Aldrich et al, 2014). Plus health professionals and adolescents themselves express concerns of the e-cigarette initiating a gateway effect in this population (Akre and Suris, 2015; Pepper et al, 2013a), despite there being no other current empirical evidence to support the gateway effect in relation to e-cigarettes.

What has been demonstrated so far in the research is that an adolescent's decisions regarding smoking can be influenced by family and friends (Ladapo et al, 2014; O'Bryne et al, 2002; Okoli et al, 2013). Also passive exposure to e-cigarettes has been shown to increase the desire to smoke regular cigarettes (King et al, 2014), parental e-cigarette ownership has been associated with e-cigarette use (Pentz et al, 2015) and positive expectancies are significantly associated with greater likelihood of e-cigarette use and higher intention of future use, when controlling for smoking status

and demographics (Pokhrel, Little, Fegan, Muranaka and Herzog, 2014). On the reverse of this, when examining social prototype (both negative and positive) of smokers, non-smoking adolescent boys who had more negative beliefs about the typical smoker were less willing to try the e-cigarette (Pepper et al, 2013b). In light of this, some schools have chosen to ban the use of e-cigarettes on their premises, due to uncertainty around safety and also the potential of modelling use to children (Hunt, 2014; Richardson, 2014).

Tobacco control professionals in the UK recognise the importance of prioritising children and adolescents through prevention and cessation targeted strategies (Action on Smoking and Health, 2008) and the current study also recognises this importance and aims to add a unique angle to the existing research on e-cigarettes and adolescents. This study aims to examine the impact of adolescent's perception of social prototypes, both negative and positive of smokers and vaperers, has on their willingness to try the e-cigarette and susceptibility to smoking conventional cigarettes, particularly in non-smokers. Furthermore, no study to date has taken into account the rapid development of e-cigarettes and included third generation products as well as first and second generation products, which the current study aims to do. This study will also aim to understand the impact flavours have on the popularity of e-cigarettes in the adolescent population, in addition to examining awareness and use of e-cigarettes in UK adolescents. Gaining an understanding of these factors could contribute to understanding the variables that influence an adolescents use of the e-cigarette and conventional cigarettes, as well as exploring the possible gateway effect to smoking, particularly in light of Social Learning Theory (Bandura, 1986).

Using a quantitative survey design, the current study will examine adolescents' awareness and use of e-cigarettes. Through the collection of data in a school based sample, it will also explore factors influencing willingness to try an e-cigarette and susceptibility to use an e-cigarette and conventional cigarette in the next year, in order to explore the gateway hypothesis which has been referred to in the e-cigarette literature (Bell and Keane, 2014; Grana, 2013), but not examined.

METHOD

DESIGN

The study adopted a between-participants survey design. The independent variables were gender, smoking status, living with a smoker, social prototypes (both negative and positive) of smokers and both first and second generation e-cigarette vaperers. The dependent variables were willingness to try an e-cigarette, susceptibility to use an e-cigarette and smoking a conventional tobacco cigarette in the next year. It was hypothesised that use and awareness of e-cigarettes would be greater for smokers than that of non-smokers and greater for boys than girls. Additionally, flavoured e-cigarettes would be more favourable than unflavoured e-cigarettes. Predictors of willingness to try an e-cigarette and susceptibility to use of both e-cigarettes and conventional cigarettes would also be explored.

PARTICIPANTS

Cohen's (1992) power tables were utilised to estimate the sample size required for the present study. Statistical power is defined as the probability of avoiding a Type II error (rejection of the research hypothesis even though it is true) and is symbolised by β. The power of a test is $1 - \beta$. It is recommended that a reasonable level of power to aim for under normal circumstances is 0.8 (Cohen, 1992). Thus, the probability of making a Type II error (β) is $1 - 0.8 = 0.2$. In the current study a medium effect size was adopted, as the current literature on adolescent use and awareness of e-cigarettes is present but limited, as can be seen in table 1 (p. 32-35). To proceed with a power calculation a medium effect size of 0.15 (Cohen, 1992) was used to detect the required sample size.

The power calculation was based on multiple regression analysis, which would measure the strength of association between the criterion variables willingness to try an e-cigarette or susceptibility to smoking a cigarette in the next year and the independent variables. An a priori power analysis using G Power with an alpha level of 0.05, an effect size Cohen's *d* of 0.15, and a power of 0.80 determined an appropriate sample size of at least 103 was required, to enable any effects to be identified.

It was expected that there would be some attrition of participants. Previous studies focused on e-cigarettes and adolescents, that collected survey data using non web based methods within schools, had response rates between 76.2% and 78% (Camenga et al, 2014a; Goniewicz and Zielinska-Danch, 2012). If a similar attrition rate was estimated for the present study, in order for a final sample of 103 participants, a baseline sample of at least 138 participants was required.

Recruitment of adolescents into tobacco research is often challenging, mainly due to the legal age of smoking being 18 years old, making them more sceptical about participating (Diviaket, Wahl,

O'Keefe, Mermelstein and Flay, 2006). The sample of adolescents was therefore recruited from schools in order to create a safe environment for adolescents to participate, with the confidence that their answers would be kept confidential. A workshop format was used to help participants understand in full the nature of the research, how their data would be used and treated confidentially. The sample size of the current study was 311 participants, however 17.68% of the sample was removed due to missing data, leaving a final sample size of 256 participants. Participants were selected using purposive sampling from two South London Sixth Form schools, one of which was mixed gender and the other was a girls only school.

Participant characteristics are shown in table 2, (p. 40-41). A total of 74.2% (n = 190) were girls and 25.8% (n = 66) were boys, all aged 16 to 19 years. The majority were under the legal age to purchase tobacco products and e-cigarette products, with 60.5% (n = 155) aged 16 years, and 32.8% (n = 84) aged 17 years. Table 2, (p. 40-41) details that just over one quarter of participants were smokers and also just over one quarter of participants lived with someone who smokes, with more non-smokers (16.8%) living with smokers, than smokers (8.6%). As illustrated in table 2, (p. 40-41), participants who were smokers ranged from smoking at least one a day (28.1%) to less than once a month (35.9). Of those that smoked daily, they had been smoking for approximately 23 months (m = 22.78, SD = 21.05), and although there was individual variation, on average they were smoking around 7 cigarettes per day (m = 7.11, SD = 3.74), with their first cigarette 31 - 60 minutes within waking (see table 2, p. 40-41).

TABLE 2: CHARACTERISTICS OF PARTICIPANTS

Characteristics	%	N	%	N	%	N
	Smokers		Non-smokers		Total sample	
Smoking status	25	64	75	192	100	256
Age (years old)						
16	12.1	31	48.4	124	60.5	155
17	10.5	27	22.2	57	32.8	84
18	2	5	3.9	10	5.9	15
19	0.4	1	0.4	1	0.8	2
Gender						
Boys	7	18	18.8	48	25.8	66
Girls	18	46	56.3	144	74.2	190
Ethnicity						
White	21.5	55	50.8	130	72.3	185
Non-white	3.5	9	24.2	62	27.7	71
Seen someone else use an e-cigarette	19.5	50	41.4	106	60.9	156
Heard of e-cigarette	24.6	63	69.9	179	94.5	242
Friends / Family	16.8	43	32.4	83	49.2	126
Television	6.3	18	28.1	72	35.2	90
Books/Magazines	2.3	6	6.3	16	8.6	22
Internet	3.5	9	17.6	45	21.1	54

TABLE 2 (cont'd): CHARACTERISTICS OF PARTICIPANTS

	%	N	%	N	%	N
Characteristics	**Smokers**		**Non-smokers**		**Total sample**	
Susceptibility...						
to smoking a regular cigarette	22.7	58	6.3	16	28.9	74
To smoking an e-cigarette	7.8	20	4.3	11	12.1	31
Smoking status	25	64	75	192	100	256
Live with a smoker	8.6	22	16.8	43	25.4	65
Used an e-cigarette	11.3	29	3.1	8	14.5	37
	Mean	**S.D.**	**Mean**	**S.D.**	**Mean**	**S.D.**
E-cigarette use (number of times)	6.08	12.16	2.4	3.17	5.03	10.48

Smoking status	**%**	**N**	**Level of addiction for daily smokers only (n = 18)**			
Less than once a month	35.9	23	**Fagerstrom items**		**Mean**	**S.D.**
At least once a month	15.6	10	Length of smoking (months)		22.78	21.05
At least once a week	20.3	13	No of cigarettes per day		7.11	3.74
At least once a day	**28.1**	**18**	**Minutes after waking**		**%**	**N**
			≤ 5		5.9	1
			6 - 30		23.5	4
			31 - 59		35.3	6
			≥ 60		35.3	6

MATERIALS

Self-designed survey (see appendix 1, p. 88-92)

A survey was designed for the study which consisted of 16 items, over 6 pages and included written instructions as well as a unique ID number for each participant, in order to maintain anonymity. The survey obtained demographic information from participants such as their gender, age and ethnicity, in addition to asking whether pupils had heard of an e-cigarette and if so, required them to tick or write the source in which this knowledge had come from. For those participants who had not heard of an e-cigarette a detailed a written statement was provided, explaining what an e-cigarette is 'e-cigarettes look like regular cigarettes but they are different. They create a mist that you breathe in like smoke, but they are not made with tobacco'.

At the time of developing the survey, only three studies had taken place using a survey design on e-cigarettes in the adolescent population (Cho et al, 2011; Goniewicz and Zielinska-Danch, 2012; Pepper et al, 2013b). Pepper et al (2013b) an American study, used an online survey to identify adolescents' awareness of and willingness to try e-cigarettes taking into account participant's beliefs of social prototypes, both negative and positive, of regular smokers. Cho et al (2011) was a Korean study and used a survey design to identify awareness of e-cigarettes in adolescents and Goniewicz and Zielinska-Danch (2012) was a large Polish study investigating use and awareness in the adolescent population. As the current study was investigating adolescents' perception of social prototypes for both smokers and vaperers, in addition to awareness, use and willingness to try, a new survey was created. However, due to some similarities between the current study and the Pepper et al (2013b) study, permission to use and adapt items from the American based study (Pepper et al, 2013b), was sought, to allow for later comparisons (see appendix 2, p. 93 for permission to use items).

The questions in the survey relating to awareness, prior use of an e-cigarette and willingness to try an e-cigarette, both flavoured and unflavoured, were assessed using six items. Susceptibility was assessed using a further two items. Awareness was assessed by asking 'Have you ever seen someone use an e-cigarette?' (No/Yes) and use was assessed by asking 'Have you ever used an e-cigarette yourself?' (No/Yes). Use was further explored by including additional questions 'If yes, how many times have you used an e-cigarette?' and 'What was it like? (For example: nice, easy, horrible etc.)'. Willingness to try a flavoured and unflavoured e-cigarette, was assessed by asking 'If one of your best friends were to offer you a regular unflavoured e-cigarette, would you try it?' and 'If one of your best friends were to offer you a flavoured e-cigarette (chocolate, mint, apple etc), would you try it?'. Questions relating to susceptibility of smoking a cigarette was assessed by asking, 'Do you think you will smoke a cigarette in the next year?' and similarly assessing susceptibility of smoking an e-cigarette was assessed by asking 'Do you think you will smoke an e-cigarette in the next year?'. Willingness and susceptibility were assessed on a four point Likert scale ranging from 'definitely yes' to 'definitely no'.

Items were also included to ascertain participant's perception of smoking prototypes in relation to tobacco cigarettes, but also first and second generation e-cigarettes. This was assessed using three items, which asked participants to 'Consider a person who smokes (a cigarette / an e-cigarette / a modified e-cigarette). How would you describe this person using the following descriptions?'. Eight adjectives were included, four items that assessed a positive prototype 'stylish', 'tough', 'cool' and 'independent', and four items that assessed a negative prototype 'unattractive', 'immature', 'inconsiderate' and 'trashy' were used. Participants would rate each description using a five point scale ranging from 'not at all' to 'very much'. Counterbalancing was used to account for any potential order effects in the survey and the eight descriptions assessing smokers or vaperers prototypes was randomly assigned for each survey. Due to the partial independence of the two types of social prototypes, the positive and negative scales were scored separately. Both the summed positive score and the negative score range from 4 to 20 with a higher score indicating high positive social perception of the prototype. Internal reliability of positive social prototype and negative social prototype was excellent, alpha = 0.856 and alpha = 0.917 respectively, with only a slight improvement to 0.925 for negative social prototype if unattractive was removed and therefore the item was left.

Pepper et al (2013b) used a similar item to measure adolescents beliefs of social prototypes of smokers. In this current study, this model was used to assess the perceptions of social prototypes of smokers and vaperers of both first generation and second generation products. For second generation and modified e-cigarettes, participants were shown a picture to help illustrate what it could look like and then asked to rate the descriptions. Two separate overall scores for positive and negative social prototypes were calculated for each individual prototype assessed (i.e. smoker, e-cigarette vaperer or modified e-cigarette vaperer). The eight adjectives 'stylish', 'tough', 'cool', 'independent', 'unattractive', 'immature', 'inconsiderate' and 'trashy' which were used in this study and the study conducted by Pepper et al (2013b) were chosen because previous research examining adolescents' appraisal of smokers in the media found image stereotypes (for example stylish, tough) were significantly associated with smoking susceptibility as opposed to emotional stereotypes (for example stressed, depressed) (McCool Cameron, Petrie, 2004; McCool, Cameron and Robinson, 2011).

The self-designed survey also included measures from the Fagerstrom test for nicotine addiction, the most widely used tool for measuring nicotine dependence (Fagerstrom, 1978). The original eight item construct, includes indices such as early morning smoking and the number of cigarettes consumed on a daily basis, which can be used as a quick method to understand someone's level of dependency in time limited situations (Fagerstrom, Heatherton and Kozlowski, 1990). The survey requested participants to state their smoking status and participants were classified as a non smoker if they responded 'Never, I am not a smoker'. All other responses where classed as smokers (less than once a month; at least once a month; at least once a week; and at least once a day). Level of addiction was recorded for those smoking once a day. As wanting to smoke and the number of cigarettes smoked per day are strong indicators of physiological dependency, time to

first cigarette and number of cigarettes smoked were used to measure level of nicotine addiction (DiFranza et al, 2013; Fagerstrom, Heatherton and Kozlowski, 1990). The survey also assessed length of time smoked, in addition to an item which sought information on whether the participant lived in a smoking household, particular as parents are less likely to smoke outside when their children are older, between 14 - 17 years old (Hawkins and Berkman, 2011).

Other materials

Other materials used were:
- Letter of invitation for schools, inviting them to participate (appendix 3, p. 95-96).
- Information sheet for schools, providing them with full details of the study (appendix 4, 97-99).
- Consent form that the schools were required to complete in order to participate (appendix 5, p.100).
- Presentation used to facilitate the workshop (appendix 6, p. 101-103).
- Consent form that participants were required to completed, should they want to participate (appendix 7, p. 104).
- Study debrief information for the participating schools (appendix 8, p. 105-106).
- Study debrief information for all the pupils who attended the workshop regardless of whether they participated in the study (appendix 9, p. 107).
- NHS Stop Smoking Health and Wealth Wheel for all the pupils who attended the workshop regardless of whether they participated in the study (appendix 10, p. 108).

PROCEDURE

Ethical approval was sought and gained from London Metropolitan University, School of Psychology, Research Ethics Committee in June 2013.

Prior to workshops and data collection and following ethical approval, the survey was piloted on a small sample (n = 4) to assess how participants understood the information on the consent form, survey and debrief sheet. As a result of this pilot phase, some items on the survey were adjusted to be presented in large coloured font, such as 'flavoured' versus 'unflavoured' and 'e-cigarette' versus 'cigarette' as participants in the pilot stage felt they overlooked the small differences between the items when it was in normal font. The pilot also recognised that participants took between 2 - 5 minutes to complete the survey, so this identified that carrying out the survey during lesson time and within a workshop would be adequate time for participants to complete the survey. Pilot data was excluded from the main analysis, due to changes made to the survey.

Of the 43 schools invited to participate, four schools confirmed detailing the designated person within the school that would arrange the workshop, however two schools later withdrew from participating in the study due to difficulties arranging appropriate times. As the two remaining schools would yield a total of 380 participants, the majority aged 16 and 17 years old, no further

schools were recruited. Within the schools' invitation to participate (see appendix 3, p. 95-96), it was explained that a 45 minute workshop (see appendix 6, p. 101-103) on smoking and its effects on health would be delivered by the researcher who was also a trained Stop Smoking Advisor. They were advised that within the workshop the pupils would be briefed about the research verbally and have the opportunity to consent to participate (see appendix 7, p. 104) in the study by completing a survey (appendix 1, p. 88-92). Two separate workshops took place in the lecture theatre of each school in November 2013. A PowerPoint presentation (appendix 6, p. 101-103) was used to guide the workshop, which started with an overview of the workshop. The workshop provided an overview of psychology, what it is and how to become a psychologist, the importance of research, the opportunity to take part in research, smoking and its effects on health, why people smoke and the most effective way to give up.

When it came to the opportunity for participants to take part in the research study, they were provided with a verbal brief of the study, including the right to not participate and/or hand in a blank survey. Participants were advised that taking part in the study was voluntary and they had the opportunity not to participate, but could also withdraw at any time. It was explained that both the consent form (appendix 7, p. 104) and a completed survey (appendix 1, p. 88-92) would be required for those interested in taking part. Surveys and consent forms were collected at the end of the workshop. Each survey had a unique ID number slip attached to it, to ensure anonymity, which students were advised to hold onto in order to identify themselves by number should they decide to withdraw from the study. Their unique ID number was also on the front of the survey and their consent form. Only surveys in which a signed consent form was provided were included in the data analysis.

Those that took part were reminded the survey was anonymous, as their name would not appear on the materials, responses would only be seen by the researcher and they could withdraw at anytime. In addition they were reminded that the data would be analysed together as a group rather than individually. All participants, regardless of whether they completed a survey were debriefed verbally and provided a written debrief (appendix 9, p. 107) and a NHS stop smoking health and wealth wheel (appendix 10, p. 108), which detailed the free phone number for support to quit smoking. All pupils were thanked for their participation in the workshop and research, and there was an opportunity for questions. A total of 311 participants consented to take part and completed a survey, which gave response rate of 81.8%. A total of 256 participants provided a survey in which all questions were answered. Following the workshop each establishment was thanked for their participation and was provided with a written debrief (appendix 8, p. 105-106). Data were entered into SPSS using the unique participant ID numbers. Following ethical guidelines, individual names which were provided on their consent forms were not included in the electronic data set.

STATISTICAL ANALYSIS

In order to examine awareness and use of the e-cigarette in a sample of sixth form pupils and the effects of gender and smoking status, a chi-squared analysis was conducted. This tested the difference between the independent groups (gender and smoking status) and could be used as the data variables gender, smoking status, use and awareness were measured using nominal levels of measurement. Additionally, each observation was independent of all the others and groups were mutually exclusive.

When observing the impact that flavours had on favourability, the percentages of smokers and non-smokers willingness to try flavoured and unflavoured e-cigarettes was reviewed to examine differences. Willingness to try the e-cigarette and susceptibility to using an e-cigarette or smoking in the next year were all analysed using a sequential hierarchical multiple regression to explore the association between the criterion variable and the relevant predictor variables; gender, living in a smoking household, social prototypes of smokers and vaperers, when controlling for smoking status and in some cases controlling for willingness to try as well. Sequential hierarchical multiple regression was used to understand the strength of the association with the criterion variable and the strength of the predictor in adding to the predictive power assessed. Using this method provided insight into the variables required to predict willingness to try an e-cigarette, as well as susceptibility to using an e-cigarette or tobacco cigarette in the next year. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. Associations amongst the predictor variables were examined and these are presented in table 3 (p. 47-48). All associations were weak to strong, $r = .02$, $p > .05$ to $r = .78$, $p < .05$, with only one correlation coefficient $> .7$, at $r = .78$ indicating that multicollinearity was unlikely to be a problem (Tabachnick and Fidell, 2007).

TABLE 3: MEANS, STANDARD DEVIATIONS AND CORRELATION COEFFICIENTS OF THE STUDY VARIABLES

Variable	X	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1.	0.25	0.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	0.74	0.44	-.03	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	0.25	0.44	.12*	-.3	-	-	-	-	-	-	-	-	-	-	-	-
4.	11.25	5.08	-.41**	-.19**	-.18**	-	-	-	-	-	-	-	-	-	-	-
5.	5.88	3.05	.09	.01	-.06	-.14*	-	-	-	-	-	-	-	-	-	-
6.	8.16	4.96	-.23**	-.07	-.13*	.62**	.07	-	-	-	-	-	-	-	-	-
7.	5.91	2.71	-.03	-.09	.02	.04	.58**	-.05	-	-	-	-	-	-	-	-
8.	9.25	5.11	-.26**	-16**	-.14*	.58**	.03	.66**	.05	-	-	-	-	-	-	-
9.	6.32	3.45	.21**	-.11*	.15*	-.08	.36**	-.07	.33**	-.12*	-	-	-	-	-	-
10.	2.86	1.02	-.6**	-.08	-.12*	.4**	-.13*	.36**	0	.36**	-.14*	-	-	-	-	-
11.	2.63	1.14	-.54**	-.07	-.13*	.35**	-.11*	.33**	.01	.35**	-.14*	.96**	-	-	-	-
12.	3.09	1	-.6**	-.07	-.1*	.4**	-.15**	.34**	-.01	.34**	-.12*	.94**	.8**	-	-	-
13.	3.32	0.8	-.47**	.02	-.09	.28**	.-03	.33**	-.02	.34**	-.12*	.73**	.69**	.71**	-	-
14.	3.09	1.15	-.78**	.02	-.13*	.46**	-.09	.27**	.06	.3**	-.11*	.7**	.64**	.7**	.58**	-

Notes. n = 256. "-" means that the corresponding statistic cannot be estimated. * $p < .05$ (1-tailed), ** $p < .01$ (1-tailed).

Use key (p. 47) to understand table.

KEY FOR TABLE 3: MEANS, STANDARD DEVIATIONS AND CORRELATION COEFFICIENTS OF THE STUDY VARIABLES

Key	Variable
1.	Smoking status
2.	Gender
3.	Live with smoker

PROTOTYPE OF

Smokers

4.	Negative
5.	Positive

E-cigarette vaperers

6.	Negative
7.	Positive

Modified e-cigarette vaperers

8.	Negative
9.	Positive

Willingness to try

10.	An e-cigarette
11.	A flavoured e-cigarette
12.	An unflavoured e-cigarette

Susceptibility

13.	Smoking an e-cigarette
14.	Smoking a cigarette

'Negative' refers to the social prototype characteristics 'unattractive, immature, inconsiderate, trashy'

'Positive' refers to the social prototype characteristics 'stylish, tough, cool, independent'

<u>**RESULTS**</u>

AWARENESS OF THE E-CIGARETTE

Of the total overall, 94.5% had heard of the e-cigarette, with friends/family (49.2%) being the most frequently cited source of knowledge, followed by television (35.2%). Although other sources including newspapers, on the news or radio, seeing adverts on bus stop, in train stations and at the airport were also identified. In addition, participants reported seeing e-cigarettes being sold in local shopping centres, on social networking sites by celebrities and a few participants reported selling them. Moreover, as detailed in table 2 (p. 40-41), 60.9% of the sample had seen someone using an e-cigarette and 14.5% had used an e-cigarette themselves (m = 5.03, SD = 10.48). Of those participants that had used an e-cigarette 19% described use using positive terms like nice and fun, 33.3% described it negatively using terms like horrible and uncomfortable and 21.4% described their experience as easy or okay. Social prototypes of smokers, e-cigarette and modified e-cigarette vaperers, revealed them to be negatively perceived as opposed to positively received (see table 4, p. 49 for means and standard deviations of social prototypes). There was no difference between smoking status and awareness of e-cigarettes for boys χ^2 (1, N = 66) = 0.54, exact p > 0.05 or girls χ^2 (1, N = 190) = 4.09, exact p > 0.05.

TABLE 4: SMOKERS AND VAPERER PROTOTYPES

	Mean (S.D.)	Mean (S.D.)	Mean (S.D.)
PROTOTYPE OF	SMOKERS	NON-SMOKERS	TOTAL SAMPLE
Smokers			
Positive	6.38 (3.02)	5.72 (3.04)	5.88 (3.05)
Negative	7.70 (4.06)	12.44 (4.83)	11.25 (5.08)
E-cigarette vaperers			
Positive	5.80 (2.49)	5.95 (2.78)	5.91 (2.71)
Negative	6.19 (3.27)	8.82 (5.26)	8.16 (4.96)
Modified e-cigarette vaperers			
Positive	7.56 (4.29)	5.90 (3.02)	6.32 (3.45)
Negative	6.95 (3.53)	10.02 (5.33)	9.25 (5.11)

'Negative' refers to the social prototype characteristics 'unattractive, immature, inconsiderate, trashy'

'Positive' refers to the social prototype characteristics 'stylish, tough, cool, independent'

PATTERNS OF USE OF THE E-CIGARETTE

Use of an e-cigarette across the entire sample (n = 256) was 14.5%. Within boy participants, nearly all smokers used an e-cigarette, whereas amongst non-smokers e-cigarette, use was low at less than 10% (see table 2, pages 40-41). Chi squared was carried out to determine the difference

between a person's smoking status and whether they used an e-cigarette. In the boy participants the difference was significant: χ^2 (1, N = 66) = 42.71, exact $p < 0.05$ and the association was strong: $\Phi = 0.804$. Smoking status accounted for nearly two-thirds of the variance of e-cigarette use in boy participants. With girl participants, just over two-thirds who were smokers used an e-cigarette, where as amongst non-smokers under a third had used an e-cigarette, very different to the findings found with boy participants. The association between smoking status and e-cigarette use was also significant in girl participants: χ^2 (1, N = 190) = 26.22, exact $p < 0.05$. The association was of moderate strength: $\Phi = 371$ and thus smoking status accounted for 13.8% of the variance of e-cigarette use in girl participants.

A third of participants were willing to try the e-cigarette if it was offered by one of their best friends, and this was similar for boys and girls. As predicted, smokers were more willing to try an e-cigarette than non-smokers, for boys and girls. Nearly half were willing to try flavoured e-cigarettes and just under a third willing to try unflavoured e-cigarettes. Of which, the majority of smokers were more willing to try a flavoured e-cigarette versus unflavoured products. With non-smoking participants, around a third were willing to try a flavoured e-cigarette as opposed to unflavoured version, like the smoking group. This demonstrates a strong preference for flavoured products, which remains present regardless of gender.

Boys were more willing to try a flavoured e-cigarette than an unflavoured e-cigarette. When examined by smoking status, nearly all of the boys who smoked were more willing to try a flavoured e-cigarette versus unflavoured and in non-smokers this trend continued, yet at a lower level with 18.8% willing to try flavoured e-cigarettes versus 4.2% willing to try unflavoured e-cigarettes. In girl participants, nearly half were willing to try a flavoured e-cigarette compared to just of a quarter willing to try an unflavoured e-cigarette. When examined by smoking status, the majority of girls who smoked were willing to try a flavoured e-cigarette compared to around three quarters willing to try an unflavoured e-cigarette. In non-smokers this trend was similar but at a lower rate, with 38.9% were willing to try a flavoured e-cigarette compared to 14.6% willing to try an unflavoured e-cigarette.

WILLINGNESS TO TRY AND SUSCEPTIBILITY TO USE

Willingness to try the e-cigarette

Hierarchical multiple regression was performed to investigate the degree to which gender, living in a smoking household and social prototypes of smokers, first generation and second generation e-cigarette vaperers predicted willingness to try an e-cigarette, when controlling for an individual's smoking status.

As detailed in table 5 (p. 52) overall, regardless of flavour types, in the first step of the model, in which smoking status was the only predictor, a third of the variance of willingness to try an e-

cigarette was explained as statistically significant (F(1,254) = 141.81, p < .05). In the second step of the model, all other variables were added including gender, living in a smoking household and social prototypes of smokers and both type of e-cigarette vaperers. A further 7.8% variance of willingness to try an e-cigarette was explained and this increase was significant (R² change = .078, F (8,246) = 4.27, p < 0.05). The model overall explained 41.6% of willingness to try an e-cigarette (Adjusted R² = 0.416) and was significant (F(9,246) = 21.18, p < .05). The significant predictors in step 2 of the model were positive prototype of a smoker and negative prototype of an e-cigarette vaperer.

Multiple regressions were carried out to investigate predictors of unflavoured e-cigarettes and flavoured e-cigarettes. In step one of the model smoking status was the only predictor about a third of the variance of willingness to try was explained as significantly significant for flavoured versions (F(1,254) = 105.33, p < .05) and unflavoured versions (F(1,254) = 142.71, p < .05). In the second step of the model, in which gender, living in a smoking household and social prototype of smokers, first generation e-cigarette vaperers and second generation e-cigarette vaperers were added, a further 7% variance of willingness to try an e-cigarette was explained for flavoured and unflavoured versions. This increase was significant for flavoured products (R² change = .071, F (8,246) = 3.42, p < 0.05) and unflavoured ones (R² change = .074, F (8,246) = 4, p < 0.05). The model overall explained nearly a third of willingness to try a flavoured e-cigarette (Adjusted R² = 0.341, F(9,246) = 15.64, p < .05) and 41.3% of willingness to try an unflavoured e-cigarette (Adjusted R² = 0.413, (F(9,246) = 20.91, p < .05) of which both were significant. The significant predictors in step 2 of the model were positive prototype of a smoker and negative prototype of an e-cigarette vaperer for both flavoured and unflavoured versions.

Factors predicting susceptibility to use the e-cigarette

The data revealed that 12.1% of participants felt susceptible to using an e-cigarette in the next year. Factors predicting susceptibility to use an e-cigarette, were analysed using hierarchical multiple regression (see table 6, p. 53). The factors investigated were gender, living in a smoking household and social prototypes of smokers, first generation e-cigarette vaperers and second generation e-cigarette vaperers ability to predicted susceptibility to using an e-cigarette in the next year, when controlling for an individual's smoking status and willingness to try an e-cigarette. The variables were entered into one model in three steps. In the first step of the model, in which smoking status was the only predictor, 22.1% of the variance of susceptibility to smoking an e-cigarette in the next year was explained as statistically significant (F(1,254) = 73.33, p < .05). In the second step of the model, in which willingness to try an e-cigarette was added, a further 3.2% variance of susceptibility to smoking an e-cigarette in the next year was explained and this increase was also significant (R² change = .317, F (1,253) = 174.71, p < .05). The third step in which gender, living in a smoking household and social prototypes of smokers, first generation e-cigarette vaperers and second generation e-cigarette vaperers were added explained 2.5% more variance, but this increase was not significant (R² change = .025, F(8, 245) = 1.76, p > .05).

TABLE 5: STANDARDISED REGRESSION COEFFICIENTS OF THE THREE-STEP HIERARCHICAL REGRESSIONS OF WILLINGNESS TO TRY

Predictor	Dependent Variable					
	E-cigarette		Flavoured e-cigarette		Unflavoured e-cigarette	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Smoking status	-.6**	-.53**	-.54**	-.48**	-.6**	-.53**
Gender	-	-.06	-	-.06	-	-.06
Live with a smoker	-	-.04	-	-.05	-	-.03
PERCEPTION OF Smokers						
Negative	-	-.05	-	-.07	-	-.03
Positive	-	-.17*	-	-.14*	-	-.18**
E-cigarette vaperer						
Negative	-	.2**	-	.19*	-	-.19**
Positive	-	.08	-	.08	-	.07
Modified e-cigarette vaperer						
Negative	-	.11	-	.12	-	.09
Positive	-	.03	-	0	-	.05
R² (Step 1)	.36**	-	.29**	-	.36**	-
R² change (Step 2)	-	.078**	-	.071**	-	.074**

Notes: n = 256. "-" means that the corresponding statistic cannot be estimated.

* p < .05 (1-tailed), ** p < .01 (1-tailed).

'Positive' refers to the social prototype characteristics 'stylish, tough, cool, independent'

'Negative' refers to the social prototype characteristics 'unattractive, immature, inconsiderate, trashy'

Factors predicting susceptibility to smoke cigarettes

In non-smokers the risk of smoking conventional cigarettes in the next year was of particular concern, as these pupils were not addicted to nicotine. The data revealed that 5.7% of non-smokers felt susceptible to use an e-cigarette in the next year and this increased by 2.6% when asked about susceptibility to smoking conventional products. For non-smoking participants, hierarchical multiple regression was performed to investigate gender, living in a smoking household and social prototypes of smokers, first generation e-cigarette vaperers and second generation e-cigarette vaperers as predictors of smoking susceptibility of conventional cigarettes in the next year in non-smokers, when controlling for willingness to try an e-cigarette. Willingness to try an e-cigarette was observed in a separate step due to it being a significant predictor in the likelihood of a pupil being susceptible to using an e-cigarette in the next year (see table 6, p. 53). The variables for non-smoking participants were entered into one model in two steps. In the first

step of the model, in which willingness to try an e-cigarette was the only predictor, 23.7% of the variance of susceptibility to smoking a regular tobacco cigarette in the next year was explained as statistically significant ($F(1,190) = 60.34$, $p < .05$). In the second step of the model, in which gender, living in a smoking household and social prototypes of smokers, first generation e-cigarette vaperers and second generation e-cigarette vaperers were added, a further 1.8% variance was shown, but this increase was not significant (R^2 change = .018, $F(8, 182) = .54$, $p > .05$). The results therefore reveal that willingness to try an e-cigarette is a significant predictor of susceptibility to using an e-cigarette in the next year and smoking cigarettes in the next year (see table 6, p. 53).

TABLE 6: STANDARDISED REGRESSION COEFFICIENTS AND COEFFICIENTS OF DETERMINATION OF THE THREE-STEP HIERARCHICAL REGRESSIONS OF SUSCEPTIBILITY.

Predictor	Dependent Variables				
	E-cigarettes (n = 256)			Regular cigarettes in non-smokers (n = 192)	
	Step 1	Step 2	Step 3	Step 1	Step 2
Smoking status	*-.47**	*-.05*	*-.06*	-	-
Willingness to try an e-cigarette	-	*.7**	*.7**	*.49**	*.49**
Gender	-	-	*.06*	-	*.09*
Live with a smoker	-	-	*.02*	-	*.01*
PERCEPTION OF Smokers					
Negative	-	-	*-.06*	-	*.12*
Positive	-	-	*.11*	-	*-.02*
E-cigarette vaperers					
Negative	-	-	*.03*	-	*-.04*
Positive	-	-	*-.08*	-	*.07*
Modified e-cigarette vaperers					
Negative	-	-	*.09*	-	*0*
Positive	-	-	*-.01*	-	*.02*
R^2 (Step 1)	.22**	-	-	.24**	-
R^2 change (Step 2)	-	.317**	-	-	.018
R^2 change (Step 3)	-	-	.025	-	-

Notes: "-" means that the corresponding statistic cannot be estimated.

* $p < .05$ (1-tailed), ** $p < .01$ (1-tailed).

'Positive' refers to the social perception characteristics 'stylish, tough, cool, independent'

'Negative' refers to the social perception characteristics 'unattractive, immature, inconsiderate, trashy'

Overall, results showed that 14.5% of participants had used an e-cigarette, but nearly all of the participants had heard of the product. Moreover, nearly two-thirds had seen someone use an e-cigarette and half had heard about them from family and/or friends. Furthermore, the study illustrates that flavoured versions are more favourable that unflavoured ones. Findings from the present study also showed having a positive prototype perception of a smoker and a negative prototype of an e-cigarette vaperer predicted willingness to try. It also demonstrated that willingness to try an e-cigarette predicted susceptibility of using the e-cigarette and conventional cigarettes in the next year.

DISCUSSION

The present study examined awareness and use of the e-cigarette in a UK adolescent population and explored factors influencing susceptibility to try an e-cigarette and smoke conventional cigarettes, in smokers and non-smokers. Whilst it found awareness of the e-cigarette was quite common in the population, use was low at 14.5% and susceptibility of use for both e-cigarettes and conventional cigarettes was found to be predicted by willingness to try an e-cigarette. Focusing on both genders allowed for comparison, particularly when previous research found boys more susceptible to smoking than girls (Veeranki et al, 2014) and reasons for initiation different for each gender (Okoli et al, 2013). Furthermore, examining these differences has also expanded our knowledge of gender differences in e-cigarette use and use susceptibility in adolescents. The current study found a third of the participants were willing to try the e-cigarette and this was similar for boys and girls. It also found that nearly all smokers who were boys used an e-cigarette, where as with girls just over two-thirds who were smokers had used the e-cigarette. Moreover, just 10% of non-smoking boys had used an e-cigarette where as a third of non-smoking girls had used an e-cigarette.

A quarter of the study participants were smokers and those that smoked daily were moderately addicted, as determined by the Fagerstrom Test for Nicotine Addiction items in the survey. The level of smoking in the current study was higher than most previous studies examining e-cigarettes and adolescents (Camenga et al, 2014a; Camenga et al, 2014b; Cho et al, 2011; Dautzenberg et al, 2013; Kinnunen et al, 2013; Lee et al, 2014; Pepper et al, 2013b; Sutfin et al, 2013;) and higher than the UKs estimated smoking prevalence in adolescents of 1 in 7 (Action on Smoking and Health, 2008). The higher rate of smokers in the current study could be attributed to the sampling selection process, as samples were selected using purposive sampling. Purposive sampling is a non-random method, which is not free from bias and the two schools who participated could differ from the schools who did not respond to participate. The study aimed to attract participants under the legal age to smoke, which may have reflected why only two schools participated. Schools could have been reluctant to participate and expose their pupils to research on a product which is illegal for them to purchase and use (Moolchan and Mermelstein, 2002). Furthermore the current study had a good response rate of 81.8%, however those that did not chose to participate could have been smokers who wanted to hide their smoking habit due to the illegal nature of smoking under 18 years (Moolchan and Mermelstein, 2002). This needs to be considered when interpreting the data as the findings could underestimate the true picture of e-cigarette use for adolescents. Moreover, smoking prevalence in London compared to the rest of the UK is generally slightly lower (Public Health England, 2010), so it is possible then this sample did not give a true and full representative of London or the UK as a whole. However the study has an added benefit of using measures from a comparable tool used in an American study (Pepper et al, 2013b) to measure some of the study variable, bringing a wider perspective to the e-cigarette and adolescent literature.

AWARENESS OF THE E-CIGARETTE

The current study investigated awareness of the e-cigarette, given the ongoing debate about marketing and advertising of the products and their potential influence on adolescents smoking behaviour (Farrelly et al, 2005). The study revealed that nearly all of the sample, regardless of their gender or whether they were a smoker or not, had heard of the e-cigarette. This was particularly higher than reports of awareness in previous studies with adolescents where 10% was reported in 2008 (Cho et al, 2011) and 67% reported in 2010 - 2011 (Pepper et al, 2013b). Adolescents were obtaining their product knowledge from a range of sources, with seeing someone using the product as the most frequently reported method of learning about e-cigarettes, followed by half of the sample reporting they gained their information from family and friends. A previous study found 79.9% of adolescents awareness of e-cigarettes came from friends and 5% from family (Kinnunen et al, 2013) and given the level of product knowledge obtained through family and friends in the current study, it is advisable that future studies assess this by splitting family and friends into two categories.

Previous literature on smoking initiation highlights that friends smoking behaviour is a key factor that can influence the uptake of smoking in youths (Kobus, 2003; Ladapo et al, 2014), where as other studies have highlighted the impact parental smoking can have (Engels et al, 2006; Gilman et al, 2009; Selya et al, 2012). Furthermore, Goniewicz and Zielinska-Danch (2013) found that pupils with a parent who smoked were more likely to use the e-cigarette. In the context of the current study, given that awareness of e-cigarettes is high and half of the population have heard about them from friends and family, further investigation as to the impact of learning from these sources could have been useful. The Social Learning Theory (Bandura, 1986) implies that adolescents could potentially model the behaviour of others, therefore understanding whether learning about the e-cigarette from peers or parents has an impact on an adolescents willingness to try the product or susceptibility to use an cigarette, would be useful. Unfortunately this could not be investigated in the current study as friends and family formed one category, but should be considered in future research. Furthermore, it should not be underestimated that in today's society children have a wider access to learning behaviours beyond what would have been considered at the time of developing the Social Learning Theory (Bandura, 1986). For example children are more technically savvy and this social change impacts on cognitive processes (Oblinger, 2004; Shumar and Renninger 2002). Environment and culture impacts on social and cognitive development more than previously assumed (Nisbett, Peng, Choi and Norenzayan, 2011) as well as the interactive and interpersonal applications of digital technology (Shumar and Renninger 2002). Moreover, the frequent exposure to web based products shapes how adolescents receive information and learn (Oblinger, 2004).

In the current study another avenue for learning about e-cigarettes was the television a third of participants had learnt about e-cigarettes through this route. It raises particular concern, because of the impact tobacco television advertising and product placement in movies has had on

adolescents in the past, before they were banned (Pierce et al,1994; Soneji, 2014; Veeranki, 2014). The number of participants aware of e-cigarettes through this channel indicates that advertising and related promotional activities via television are reaching this group, understanding whether this impacts on use behaviour should also be examined. The high level of awareness in the current study highlights the importance of assessing the impact of awareness on the adolescent population, particularly to ensure that it does not lead to use in non-smoking adolescents, through potential modelling (Okoli, 2013; Ladapo et al, 2014). Also identified in previous literature is the internet as a popular source of adolescents learning information about the e-cigarette (Cho et al, 2011; Kinnunen et al, 2013), however the current study found television was regarded as a more prevalent source providing e-cigarette knowledge in the current sample. Where adolescents are getting their information and knowledge of e-cigarettes is important but also knowing how they interpret this information provides added benefit to paint a fuller picture of e-cigarette knowledge and whether it leads to subsequent behaviours in adolescents.

PATTERNS OF USE OF THE E-CIGARETTE

Reporting 14.5% use in 16-19 year olds, the current results indicate an increase of nearly 5% more use than that reported in the UK only one year previously (Action on Smoking and Health, 2014). Despite being only a small amount of adolescents using the products, this continues to highlight the rapid rise in e-cigarette use in a short space of time, similar to rates of increase found in the USA (Corey et al, 2013). It is important to recognise that use in studies has varied considerably from <1% (Cho et al, 2011; Pepper et al, 2013b) to 24% (Goniewicz and Zielinska-Danch, 2012), with only two studies reporting use higher than that found in the current study (Goniewicz and Zielinska-Danch, 2012; Kinnunen et al, 2013). The reason behind this may be due to country variation in the regulatory mechanisms governing the sale and distribution of e-cigarettes (Franck et al, 2014).

Monitoring use in adolescents is important, particularly those that have never smoked, to assess whether e-cigarettes could be seen as an introduction into nicotine and if it then has the potential to create a gateway into other tobacco products (Akre and Suris, 2015). Added to this, looking into differences between smoking and non-smoking groups is also essential, as it could help inform prevention efforts in non-smoking adolescents and improve smoking cessation interventions for adolescent smokers. Therefore examining differences between smokers and non-smokers remains integral for understanding how e-cigarettes are used in this vulnerable age group, where smoking initiation begins for the most part. In the current study use among never smokers was 3.1%, similar to that reported in Goniewicz and Zielinska-Danch (2013). However other studies exploring adolescents and e-cigarettes have reported varied use in never smoked youths ranging from 0.6% (Lee et al, 2014) to 18.6% (Dautzenberg et al, 2013). It is unclear as to why reports on use in adolescent never smoked varies so much, but use in never smoked adolescents could be due to experimentation, as novelty seeking behaviour is known to predict experimentation with substance

use in adolescence (Crawford, Pentz, Chou, Li and Dwyer, 2003; Horvath and Zuckerman, 1993; Zuckerman, Ball and Black, 1990).

A potential flaw in the current study was not investigating the frequency of use of the e-cigarette, in a way that would have demonstrated whether pupils were using them on a periodical basis or experimenting. Future research should aim to capture this information, as well as gaining an understanding of the sequential chain of use, for example was use of the e-cigarette prior to smoking conventional cigarette. This information would be useful to determine in more detail the potential gateway effect. Some previous studies on e-cigarettes and adolescents have tried to measure experimentation, by distinguishing between ever use and use within the past 30 days (Dautra and Glantz, 2014; Goniewicz and Zielinska-Danch, 2013) and continuing to understand use in this population will help estimate the harm the products could have on this age group. Interestingly, use in non-smoking girls was higher than that of non-smoking boys, however making inferences of this finding is difficult due to the small numbers of never smoked e-cigarette users. However, it is important to keep track of whether the demographics of never smokers that are attracted to using the e-cigarette differs from those smokers who use the e-cigarette, in order to track whether this use then graduates into smoking conventional cigarettes of those that may not have otherwise used the product. If this is the case implementing preventative measures to curb e-cigarette use in never smokers would need to be implemented to prevent smoking prevalence in adolescents inclining.

The current study predicted that use would be greater for smokers than non-smokers, as found previously in adolescent and adult populations (Brown et al, 2014b; Dautzenberg et al, 2013; Etter and Bullen, 2011; Giovenco et al, 2014; Goniewicz and Zielinska-Danch, 2012; Harrington et al, 2014; Kinnunen et al, 2013; Pearson et al, 2012; Pepper et al, 2013a; Sutfin et al, 2013; Ruther et al, 2014; Tan and Bigman, 2014). It also predicted that use would be greater for boys than girls based on findings from studies exploring use in adult groups that reported a large proportion of e-cigarette users are men (Etter, 2010, Etter and Bullen, 2011; Foulds et al, 2011; Goniewicz et al, 2013; Ruther et al, 2014; Siegel et al, 2011). The results did confirm the predictions and revealed that the number of smokers who had used the e-cigarette was significantly greater than non-smokers, with a very small number of non-smokers using the product. Also use was greater for boys than girls, with nearly all boy smokers using the e-cigarette.

This was consistent with findings from previous studies on adolescents (Cho et al, 2011; Goniewicz and Zielinska-Danch, 2012), young adults (Czoli, Hammond and White, 2014) and adults (Etter, 2010, Etter and Bullen, 2011; Foulds et al, 2011; Goniewicz et al, 2013; Siegel et al, 2011), that also found use higher in smokers than non-smokers and male than females. The fact that use is higher in smokers than non-smokers in the adolescent population is a reassuring notion, as nicotine is a highly addictive substance (World Health Organisation, 2011) and therefore it is important to keep the number of never smokers initiating use of nicotine at a minimum, regardless of how it is distributed. However, previous studies have found that use in adolescent smokers is

often associated with high dual use with smoking, making it questionable whether this group is using e-cigarettes as a cessation aid (Camemga et al, 2014a; Camemga et al, 2014b; Dutra and Glantz, 2014; Kinnunen et al, 2014; Lee et al, 2014). However, with studies revealing the e-cigarette as benefiting smokers, even those not wanting to quit smoking reduce their cigarette consumption in the adult population (Brown et al, 2014b; Bullen et al, 2010; Caponnetto et al, 2011; Chapman and Wu, 2014; Etter, 2010; Etter and Bullen, 2011; Foulds et al, 2011; Goniewicz et al, 2013; Kosmider et al, 2012; Siegel et al, 2011; Tower et al, 2011), should the safety and efficacy of e-cigarettes be strengthened and marketing of the products ensures they target smokers only, they could be used as a cessation aid to support adolescent smokers, particularly boys to quit smoking, especially as smoking cessation programmes for adolescents need strengthening (Garrison et al, 2003; Thomas et al, 2013).

The current study did not explore the context as to how adolescents were using e-cigarettes, which should be considered in future studies. The disparity between current and previous research studies investigating adolescent's awareness and use of the e-cigarette suggests more research is needed so health professionals, policy makers and the public can make more informed decisions about e-cigarettes and the impact to the adolescent population. One study reported that health providers wanted more information about e-cigarettes and 11% reported treating adolescents using them (Pepper et al, 2013a). Future research on awareness and use of the e-cigarette could provide ways to strengthen cessation and prevention methods in young people, particularly if e-cigarettes are deemed a safe and efficient smoking cessation aid in the future.

WILLINGNESS TO TRY AND SUSCEPTIBILITY TO USE

Given the current debate regarding the pros and cons of the e-cigarette, adolescents willingness to try the product and their susceptibility is particularly important to understanding the gateway effect. Unlike traditional cigarettes, e-cigarettes can be puffed at varying intervals, possibly making them attractive to never smokers, due to their ability not to burn out as quickly and last longer than a regular cigarette. Also vapour production remains of particular concern especially if products are used inside, as they give the impression that someone is smoking inside (Faletau, Glover, Nosa, and Pienaar, 2013), rebelling against the smoke-free bans which were successful in reducing smoking prevalence. It is important that the production of vapour does not normalise smoking again, particularly in public places, as this could turn back the clocks regarding attitudes to reducing smoking prevalence. Understanding how adolescents perceive vaperers and whether this influences their willingness to try the product and was a central part of the current study.

The willingness model (Gibbons and Gerrard, 1995) which suggests that health related decisions involve social reaction processes that influence spontaneous willingness, rather than planned intentions, demonstrates that adolescents are less likely to predict how they would behave in a given situation and more likely to take risks. The model poses that if a particular behaviour is associated with a negative image, young people will want to avoid the behaviour and avoid a

negative social reaction and similarly, building positive images of behaviour, young people will want to associate themselves with that perception. Interestingly, previous smoking research has found that image stereotypes like sexy and stylish are more likely to be associated with smoking susceptibility (McCool et al, 2013) and rejecting negative labels attached to smoking increases the likelihood of young adults smoking (Dietz et al, 2013). It is therefore important to understand what type of prototype perceptions adolescents place on e-cigarette vaperers and smokers, also whether this has an impact on their willingness to try the products. A recent study used qualitative methodology to investigate adolescents views of the e-cigarette as a gateway to addiction and found that participants felt the e-cigarette could be a smooth transition and prepare adolescents for real smoking (Akre and Suris, 2015).

In the current study, beliefs about prototypes were assessed separately for smokers, a first generation vaper user and a modified vaper user and participants were asked to rate a range of descriptions they would associate with them. Positive and negative descriptions to form separate prototypes were the same as used in a previous study examining adolescents and e-cigarettes (Pepper et al, 2013b). Positive prototypes included stylist, tough, cool and independent characteristics, whereas negative prototypes were made up of unattractive, immature, inconsiderate and trashy labels. In the current study the results demonstrated that the more someone negatively perceived someone who used an e-cigarette, the less they were willing to try the product. Previously, Pepper et al (2013b) found non-smoking adolescents who had negative beliefs about a typical smoker were less willing to try the e-cigarette. The findings of the current study and Pepper et al (2013b) study suggest that presenting a negative connotation and/or images of smokers and e-cigarette users could potentially discourage adolescents from trying e-cigarettes. However, should e-cigarettes be improved and strengthened to provide effective cessation aid to smokers, it would be unwise to portray a negative view of a potential medical device to adolescents.

The findings also found that the more adolescents positively perceived a smoker the more they were willing to try an e-cigarette. This is similar to Pokhrel et al (2014) who found positive expectancies were significantly associated with greater likelihood of e-cigarette use and higher intention of future use. Also, previous research has found that adolescents with a positive attitude to conventional smoking had higher ever use of e-cigarettes (Kinnunen et al, 2013; Pepper et al, 2013b;). Moreover, a recent qualitative study of adolescents reported e-cigarettes may be appealing to adolescents due to the sweet taste, ease to obtain, hide from parents and use indoors (Akre and Suris, 2015). However, reassuringly, the current results revealed the more positive adolescents perceived a vaperer was not significantly associated with willingness to try an e-cigarette, given that e-cigarettes are being marketed using a range of avenues which adolescents have access to. In light of the results, it is important that any advertising and marketing laws continue to ensure that there is no persuasive encouragement of positive connotations of smoking included in any advertising. The current study did not find gender as a significant factor that influenced an adolescents willingness to try an e-cigarette, despite the literature (Cho et al, 2011;

Goniewicz and Zielinska-Danch, 2012) and the current study demonstrating that use of e-cigarettes is higher in boys than girls. Moreover, whether an adolescent lived in a smoking household was another factor that did not influence an adolescents willingness to try. So despite the smoking literature demonstrating that parental smoking can increase smoking susceptibility in adolescents (Engels et al, 2006; Gilman et al, 2009; Selya et al, 2012), the current study showed that this was not the case for e-cigarettes. However, more research is recommended to support this due to the lack of supporting literature to support this in e-cigarette use.

The current study also explores the impact of flavours on willingness to try an e-cigarette in the adolescent population. Similarly a previous study (Pepper et al, 2013b) explored this also in 11 - 19 year old boys and their research suggested flavour may not impact favourability of e-cigarettes, however, the researchers felt this area warranted further investigation. The current study examined the impact of flavoured taking account of the recommendations made by Pepper et al (2013b) to making a clear distinction between unflavoured and flavoured in the survey questions, to reduce the likelihood of confusion in responses. The results illustrated that flavoured e-cigarettes were more favourable than unflavoured versions, in line with qualitative reports from adolescents that the sweet taste of e-cigarettes contributed to their appeal (Akre and Suris, 2015) . Regardless of gender or smoking status, the flavoured e-cigarettes were preferred, with around a third of non-smokers willing to try a flavoured e-cigarette. The findings provide supporting evidence that flavoured e-cigarettes are more appealing to adolescents, both smokers and non-smokers, current/past e-cigarette users and never users, supporting researchers concerns (Cobb et al, 2010). The potential appeal of flavoured products to young people raises concerns, particularly when e-liquids are extremely toxic (Bahl et al, 2012), but also that flavours can mask the taste of tobacco, which could be appealing to youths, as are flavoured conventional cigarettes more appealing to youths as demonstrated in the literature (Ashare et al, 2007; King et al, 2013; King et al, 2014). It is therefore important that marketing and advertising of e-cigarettes are cautious when advertising flavours, which could increase an adolescents willingness to try the products. However, based on the findings of this study alone, additional studies with a more representative sample would be beneficial.

Also more in-depth research into why flavours are more appealing to this age group could help inform legislation to restrict sales to under 18's and strengthen legislation on marketing and promotion, particularly those that are flavoured to ensure they do not target youth. It is important to ensure that the positive impact that legislation around marketing and advertising of tobacco products (Action on Smoking and Health, 2006) and the smoke free legislation (Seigel et al, 2005) has had in reducing smoking rates and smoking initiation in adolescents, is not undone and that the e-cigarette would not act as a gateway into smoking for young people. In addition, as e-cigarettes evolve from first generation e-cigarettes to include flavours and now even to be personalised, the rapid speed of product development and the impact of this on adolescent population also needs investigating. It is critical that e-cigarette marketing and promotion does not

lead to a glamorisation of smoking, given the similarities of e-cigarettes to conventional cigarettes to avoid sabotaging smoking prevention efforts in this age group.

Understanding whether using nicotine in the form of e-cigarettes leads to an increased susceptibility to smoking conventional cigarettes in non-smokers could help reduce concerns, particularly where public health professionals, regulations and legislators have been working so hard to reduce smoking prevalence and prevent young people from smoking in the first place due to the harms associated with tobacco products (World Health Organisation, 2011). The current study aimed to understand the factors that predict susceptibility to trying an e-cigarette or a conventional cigarette, which could help understand the potential impact e-cigarettes are having on uptake of alternative nicotine use. The results revealed willingness to try an e-cigarette was a significant predictor of susceptibility to using an e-cigarette or conventional cigarette in the next year. Moreover, with fears about non-smokers initiating nicotine use, particularly in adolescence, the current study explored factors that could predict susceptibility to smoking a regular tobacco cigarette in non-smokers. The results found willingness to try an e-cigarette was a statistically significant predictor. Echoing the arguments of the willingness model (Gibbons and Gerrard, 1995), willingness to try an e-cigarette was a significant predictor of both susceptibility to using an e-cigarette or a conventional cigarette in the next year. This was an interesting finding, which public health professionals and government must take notice of. If willingness to try an e-cigarette is strongly linked to susceptibility of use, marketing and advertising must not be creating e-cigarettes to be trendy and glamorous in the eyes of adolescents. Also the impact flavoured products can have on an adolescents willingness to try an e-cigarette, as found in the current study must be appreciated when formulating marketing regulations.

A NEW GATEWAY TO ADDICTION?

Added to this there are concerns around the safety and efficacy of e-cigarette products (Bahl et al, 2012; Davis et al, 2014) in a currently unregulated market. Plus the suspicions that they could potentially model smoking behaviour to adolescents (Franck, Budlovsky, Windle, Filion and Eisenberg, 2014; Harrell, Simmons, Correa, Padhva and Brandon, 2014) has raised concerns that the products have a negative impact on public health (Grana, 2013; World Health Organisation, 2014b). These concerns have been referred to as the gateway and renormalisation effect (Grana, 2013; World Health Organisation, 2014b). However, on the contrary in the adult population there is documented positive effects that e-cigarettes have had for adult smokers, assisting them to reduce their tobacco intake and in some cases quit (Brown et al, 2014a; Bullen et al, 2010, Caponnetto et al, 2011; Chapman and Wu, 2014; Etter, 2010; Etter and Bullen, 2011; Foulds et al, 2011; Goniewicz et al, 2013; Kosmider et al, 2012; McQueen et al, 2011; Siegel et al, 2011) with a rapid rise in the e-cigarettes range and availability (Ayers et al, 2011; Brown and Cheng, 2014).

The gateway effect stems from previous literature on the gateway hypothesis (Kandel, 2002), which is a framework for understanding adolescents drug involvement and posits that certain drugs

serve as a gateway for the use of other drugs. Its history can be traced back to the 1930s stepping stone theory which assumes the consumption of soft drugs such as marijuana would lead to the addiction of other drugs (Kandel, 2002). Although often the introduction of the gateway hypothesis is credited to Kendal (Bell and Keane, 2014), who introduced the concept using a staged account related to a progression of risk, rather than obligatory stages a person would transition through. The staged account argues that drug use in adolescents proceeds through a set of hierarchical sequences, from the involvement with beer and wine to higher volume sprits and cigarettes, to marijuana, to other illicit drugs, where progression through the stages increases a person's risk of trying a product higher up the stage (Kandel, 2002). This gateway hypothesis is a controversial topic that is not universally accepted (Bell and Keane, 2014), where research has demonstrated that many users do not progress to use other drugs and that access to gateway substances does not always depend on use of substances at a lower stage (Degenhardt et al, 2010; Pudney, 2003).

The bone of contention regarding the gateway hypothesis more recently is within e-cigarette literature (Bell and Keane, 2014), particularly as it is being translated in a slightly different way then what was traditional deemed as the gateway hypothesis (Bell and Keane, 2014). The traditional view of the gateway hypothesis describes the movement from a softer to a harder drug (Kandel, 2002). The concept of an e-cigarette as a gateway differs in that it refers to the movement from nicotine to nicotine, but in a different format, such as from non-combustible to combustible and also often predicting what will happen rather that explaining the pattern of drug use (Bell and Keane, 2014). Within the e-cigarette literature, the gateway effect does refer to young people, particularly non-smokers that would initiate nicotine use through e-cigarettes, that would not have otherwise have tried nicotine and therefore nicotine use becomes greater in this group, which could then lead to the young person switching to smoking conventional cigarettes (Grana, 2013; World Health Organisation, 2014b). Only one study (Camenga et al, 2014b) reports e-cigarette users as more likely to use alternative tobacco products, like blunts (marijuana rolled in tobacco) and hookah than smokers and never smokers, but also reported e-cigarette users did not have an increased risk of using alcohol or marijuana alone (Camenga et al, 2014b). However due to the small sample used in this study and the lack of supporting literature, further evidence is needed to support the notion that e-cigarettes could be a gateway to addiction. Furthermore, youth e-cigarette experimentation has not yet been connected with an increase in cigarette use (Abrams, 2014). More recently a qualitative study of 48 adolescents reported that for some the e-cigarette acted as a gateway to smoking conventional cigarettes, however for some they did not perceive the e-cigarette as a risk for a gateway and felt the e-cigarette could keep adolescents away from smoking and would only be used by smokers (Akre and Suris, 2015).

The current study partly explored this gateway effect by examining UK adolescents e-cigarette use, willingness to try an e-cigarette and susceptibility to using e-cigarettes in the next year and conventional cigarettes in the next year. It found that willingness to try an e-cigarette was a significant predictor of susceptibility to use of conventional cigarettes, which could be interpreted as a gateway effect, in terms of adolescents inclined to use e-cigarettes and then switch to

conventional cigarettes (Bell and Keane, 2014). However, inclination alone is not sufficient to support the proposed gateway effect and future research using longitudinal methodologies would enable researchers to track the trend in e-cigarette use over time, observing whether e-cigarettes are truly serving as a gateway to addiction for other forms of nicotine products.

STRENGTHS AND LIMITATIONS

Overall, the current study has a number of strengths and some limitations, but in light of the results, advertising and marketing laws should be strengthened to limit the advertising of flavours, particularly as smoking research already demonstrates the impact flavoured products can have on the adolescent population (Ashare et al, 2007; King et al, 2013; King et al, 2014). E-cigarettes are different to conventional cigarettes, with research demonstrating that in the adult population they are often used to reduce nicotine consumption or to quit smoking (Brown et al, 2014b; Bullen et al, 2010, Caponnetto et al, 2011; Chapman and Wu, 2014; Etter, 2010; Etter and Bullen, 2011; Foulds et al, 2011; Goniewicz et al, 2013; Kosmider et al, 2012; McQueen et al, 2011; Siegel et al, 2011), and the main users of these products are smokers (Brown et al, 2014b; Etter and Bullen, 2011; Giovenco et al, 2014; Harrington et al, 2014; Pearson et al, 2012; Ruther et al, 2014; Tan and Bigman, 2014). This needs to be made clearer to avoid confusion that comes from their similarities. Previous literature found that when asked to compare e-cigarettes to conventional cigarettes near a quarter of adolescents were unsure (Sutfin et al, 2013). Furthermore, studies have found only just over 50% of adolescent report e-cigarettes are safer than cigarettes (Action on Smoking and Health, 2013; Goniewicz and Zielinska-Danch,2013; Sutfin et al, 2013) and three-quarters rating them less harmful than cigarettes to those around them (Action on Smoking and Health, 2013). Making this distinction clearer could avoid adolescent experimentation in never smokers. Moreover, a clearer understanding of their differences may even highlight to adolescents even further the convoluted and protracted difficulties many smokers face when trying to give up, related to the struggle of addiction .

The current study, like most other past studies on e-cigarettes and adolescents (see table 1, p. 32-35) adopted a survey design collecting data directly from adolescents. This method allows the research to capture real time information from a large number of participants. Given the rapid growth in e-cigarette use and awareness, this is useful to help quantify the impact on adolescents. The sample size of the current study exceeded that of which was required to enable any effects to be identified, however the sample size of 256 was small in comparison to some of the other studies on adolescents and e-cigarettes. Sample sizes of previous studies using survey design vary considerably from around 200 participants (Pepper et al, 2013b) to in excess of 75,000 participants (Lee et al, 2014). Also the sample was taken from two South London schools, using non random methods and so it does not fully represent London or the UK as a whole and obtaining more representative sample would improve the ability to generalise the results. Added to this, self reported measures also comes with limitations, with the main one that it assumes the individual will accurately and truthfully respond. A systematic review and meta analysis of the validity of self

reported smoking, highlights the concern of under reporting particularly in a school setting (Patrick et al, 1994), however later research has found that adolescents self report is largely consistent with serum cotinine testing (Caraballo, Giovino and Pachacek, 2004; Dolcini, Alder, Lee and Bauman, 2003). Moreover, the effects of the Social Norms Theory (Perkins and Berkowitz, 1984) which highlights that inflated perceptions and exaggerated beliefs could be constructed by collecting data in an educational establishment should be considered. The current study collected their data during school time and as part of an educational workshop, as did other studies (Camemga et al, 2014a; Camemga et al, 2014b; Cho et al, 2011; Corey et al, 2013; Dautzenberg et al, 2013; Goniewicz and Zielinska-Danch, 2013; Lee et al, 2014; Pentz et al, 2015), however this could have an effect on their knowledge and attitudes of the e-cigarette and thus on the survey results, so this should be considered when interpreting the results.

Similar to other data on e-cigarettes and adolescents the data was cross sectional, which only allows the identification of associations and not casual relationships. Other types of methodological research on e-cigarettes and adolescents would be recommended, like qualitative methods or prospective longitudinal research. Qualitative methods could help provide a deeper understanding of how adolescents are using e-cigarettes, their reasons for using the e-cigarettes and their beliefs and attitudes about the products, which is hard to capture in detail in a survey. For instance the current study and previous studies (Kinnunen et al, 2013; Pepper et al, 2013b; Pokhrel et al, 2014) have found that positive perceptions of a smoker can increase willingness to try an e-cigarette and qualitative research may be able to delve into this in a bit more detail, making sense of it from the participants point of view. Currently only one qualitative study exists (Akre and Suris, 2015). Longitudinal studies on the other hand, would give an advantage of following an adolescent potential nicotine use, understanding if and how the gateway hypothesis can even be applied to this product, as cross sectional survey data is not detailed enough to prove a direct casual gateway connection.

The current study makes an original contribution to the existing literature on adolescents and e-cigarettes and provides a timely investigation of an emerging public health issue. It is also the first study in the adolescent population to consider the impact of later generation e-cigarette products on adolescents. Future studies must also consider the rapid rate in which products are innovating and developing and the potential impact this may have on their results. In order to strengthen future studies on e-cigarettes and adolescents there should also be commonality in the measures used to understand the frequency of e-cigarette use. The current study used a simply yes/no measure to determine ever use of e-cigarettes, as did other studies (Cho et al, 2011; Goniewicz and Zielinska-Danch, 2013; Kinnunen et al, 2014; Lee et al, 2014; Pepper et al, 2013b; Sutfin et al, 2013). Whereas some studies try to understand use even further by attempting to quantify the frequency (Action on Smoking and Health, 2013; Kinnunen et al, 2014; Pentz et al, 2015). Other studies try to account for current use, taking use within the last 30 days as an indication of current use (Goniewicz and Zielinska-Danch, 2013; Lee et al, 2014; Sutfin et al, 2013) and other studies group e-cigarettes with tobacco products, asking which products an adolescent has used, as not to

prompt recall (Camemga et al, 2014a; Camemga et al, 2014b; Dutra and Glantz, 2014). A standardised way of measuring e-cigarette use is needed to help draw future comparisons. Furthermore e-cigarettes are no longer products which look like regular cigarettes, there are large variations in the market, where they come in all shapes and sizes, sometimes personalised for the user (Ayers et al, 2011; Brown and Cheng, 2014) this needs to be taken into account when conducting studies and interpreting results.

With the rising level of e-cigarette awareness and use reported in adolescents, in this study and others, there is a need for further investigation on population risk and benefits and the effect on tobacco product use. Marketing and advertising of e-cigarettes needs to consider the impact they are having on the younger population, particularly the impact of flavoured products that are appealing to youths. Given the relatively low price of some e-cigarettes, cost is not likely to be a barrier and the impact of flavouring on e-cigarette appeal to youth initiation needs to be explored further. The level of awareness could be supported by educational information for young people on e-cigarettes and why the adult population are using them, empowering them with correct product knowledge, which may improve their self-efficacy and decrease the likelihood of use (Fishbein and Cappella, 2006; Langford et al, 2014). This would potentially avoid unnecessary willingness to try a product that is often used to reduce smoking intake in those smokers looking for a healthier alternative. A cohort study that tracks adolescent behaviour over time, to examine how and when use occurs, particularly prior to potential smoking initiation, will provide better understanding of the potential gateway effect. Future research would benefit from monitoring e-cigarette use among adolescents over a longitudinal period and their effect on using other nicotine products to explore whether the graduation to conventional smoking is in fact true.

It will be a major public health concern if e-cigarettes initiate tobacco use in never smokers, raising smoking rates in young people. Although e-cigarettes do have the potential to help millions of smokers reduce or quit and the potential to saves lives (Dautzenberg and Dautzenberg, 2014; Fagerstrom and Bridgeman, 2014), turning back the clocks on smoking prevention efforts to protect young people is not an option, neither is starting a lifelong addiction in young people that would not have considered it anyway. Also despite investigations still being done into e-cigarette safety and effectiveness, how information on the e-cigarette is translated to young people must be considered. For many, information comes from family and friends, a more reliable source of sharing information on e-cigarettes is needed. This means that knowledge and comfort of discussing e-cigarettes in an unbiased way must be ensured with health professionals (Pepper et al 2013a) and other professionals that work closely with adolescents to ensure information carefully translates the purpose and use of e-cigarettes in the adult population to help curb willingness to try them in adolescents. Should e-cigarettes be deemed to be a safe and effective route to quitting smoking, further investigating their place as a quitting aid for adolescent smokers would be beneficial to understanding the most effective cessation interventions, if any, need to be accompanying them (Vuvkovic, Polen and Hollis, 2003).

SUMMARY

In summary, the current study is a unique addition in the field of health psychology by assessing factors in adolescents that influence susceptibility to trying e-cigarettes and conventional cigarettes. It adds to the rapidly evolving but limited research on e-cigarettes among adolescents adding a fresh insight into the plausibility of the gateway effect, which is mentioned in e-cigarette literature (Akre and Suris, 2015; Bell and Keane, 2014; Grana, 2013; World Health Organisation, 2014b). The study found that nearly all participants were aware of the e-cigarette, with seeing someone use one, or finding out about them from family and friends as a way of learning about them. Use whilst low at 14.5% is increased from 10% reported in the UK in 2012 by Action on Smoking and Health (2014). Also despite a high response rate, those that did not respond could mean that the figures reported in this study are still an underestimate of what is currently taking place. The current study also identified that flavoured products were more favourable than unflavoured versions and so it is recommended that marketing legislations take this into account to avoid any potential enticement of e-cigarette products to adolescents. The fact that the results also illustrated that a positive prototype of a smoker predicted willingness to try e-cigarettes should be considered in relation to marketing and advertising laws. There should be no persuasive encouragement of positive connotations of smoking included in any advertising. Furthermore, the study found a negative prototype of an e-cigarette vaperer discouraged willingness to try e-cigarettes in adolescents, however given the research that illustrates e-cigarettes have supported adult smokers to quit and cut down (Brown et al, 2014b; Bullen et al, 2010, Caponnetto et al, 2011; Chapman and Wu, 2014; Etter, 2010; Etter and Bullen, 2011; Foulds et al, 2011; Goniewicz et al, 2013; Kosmider et al, 2012; McQueen, Tower and Sumner, 2011; Siegel et al, 2011), it would be unwise to portray a negative view of e-cigarettes to adolescents. Given the timely nature of the current study, in light of key industry developments relating to e-cigarettes, the results of this research could be used to inform tobacco prevention around a non-tobacco product. It may also contribute to the development of appropriate policy implementation to protect adolescents and enable tobacco control professionals to pay more attention to marketing avenues in order to protect never smoked. These results could also shed some light on strengthening smoking cessation interventions in the adolescent population.

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APPENDICES

APPENDIX 1: SELF-DESIGNED SURVEY

Questionnaire

- **Do not put your name on the questionnaire**

- **Make sure no one can see your answers**

- **Be honest, your answers will <u>not</u> be shared with parents or carers, teachers, youth workers, friends or anyone else**

- **This questionnaire should take no longer than 10 minutes to complete**

- **Once completed put your hand up and return the questionnaire to the researcher, Tilean Clarke**

Please tick appropriate box

Q1.   Are you boy or girl?

□ Boy   □ Girl

Q2.   How old are you now?

□ 11   □ 12   □ 13   □ 14   □ 15   □ 16   □ 17   **years old**

Q3.   Which of the following best describes your ethnicity?

White – British		Asian or Asian British - Indian	
White – Irish		Asian or Asian British - Pakistani	
White - Other background		Asian or Asian British - Bangladeshi	
Mixed - White and Black Caribbean		Asian or Asian British - Other background	
Mixed - White and Black African		Black or Black British - Caribbean	
Mixed - White and Asian		Black or Black British - African	
Mixed - Other background		Black or Black British - Other background	
Any other ethnic group (write which one)		Not stated	

Q4.   Have you heard of electronic cigarettes or e-cigarettes?

□ Yes   □ No

Q5.   If you have heard of the e-cigarette, where did you hear about it? (you can tick one or more)

□ Friends / Family   □ Television   □ Books / Magazines   □ Internet

□ Other (please state) ....

What is an e-cigarette?

E-cigarettes look like regular cigarettes but they are different.

They create a mist that you breathe in like smoke, but they are not made with tobacco.

Q6. **Consider a person who smokes a regular cigarette.**
How would you describe this person using the following descriptions?
(Note: please provide an answer for all 8 descriptions and tick appropriate box)

	Not at all	Slightly	A little	Quite a bit	Very much
Stylish					
Tough					
Cool					
Independent					
Unattractive					
Immature					
Inconsiderate					
Trashy					

Q7. **Consider a person who smokes an e-cigarette.**
How would you describe this person using the following descriptions?
(Note: please provide an answer for all 8 descriptions and tick appropriate box)

	Not at all	Slightly	A little	Quite a bit	Very much
Stylish					
Tough					
Cool					

Independent					
Unattractive					
Immature					
Inconsiderate					
Trashy					

Q8.   Have you ever seen someone use an e-cigarette?

□ Yes   □ No

Q9.   Have you ever used an e-cigarette yourself?

□ Yes   □ No

If yes, how many times have you used an e-cigarette? _____
What was it like? _____ **(For example: nice, easy, horrible etc.)**

NOTE: For the next four questions, please tick one number.
1 = Definitely yes, 2 = Probably yes, 3 = Probably not, 4 = Definitely not

Q10.   If one of your best friends were to offer you a regular <u>unflavoured e-cigarette</u>, would
you try it?
□ 1   □ 2   □ 3   □ 4

Q11.   If one of your best friends were to offer you a <u>flavoured e-cigarette (chocolate, mint,</u>
<u>apple etc)</u>, would you try it?

□ 1   □ 2   □ 3   □ 4

Q12.   Do you think you will smoke a <u>cigarette</u> in the <u>next year</u>?

□ 1   □ 2   □ 3   □ 4

Q13.   Do you think you will smoke an <u>e-cigarette</u> in the <u>next year</u>?

□ 1   □ 2   □ 3   □ 4

Q14. **How often do you smoke now?**

□ Never, I am not a smoker   □ Less than once a month   □ At least once a month

□ A least once a week   □ At least once a day

If you smoke, at least once a day

How long have you smoked? _____(years/months)

How many cigarettes do you smoke per day? _____

How soon after you wake up do you smoke your first cigarette?
□ 5   □ 6 – 30   □ 31 – 60   □ After 60   **minutes**

Q15. **Do you live in a household where someone smokes?**

□ Yes   □ No

Thank you very much for completing this questionnaire.

Please put your hand up and give the questionnaire to Tilean Clarke

APPENDIX 2: PERMISSION FROM PEPPER ET AL (2014)

From: ███████████████████████

Sent: 13 May 2013 14:32:19

To: Tilean Clarke ████████████████████ ; Brewer, Noel (ntb@unc.edu)

Cc: ████████████████████████████

1 attachment

HIS son followup survey.pdf (271.5 KB)

Hi Tilean,

Here is a PDF copy of the entire survey. The items related to e-cigarettes are S571-S577. Although the attached PDF copy of the survey has a preferred citation listed at the beginning, please cite my e-cigarette paper in JAH instead if you're using the e-cigarette items. If you plan on using other items, please let me know so I can ensure you're using the appropriate citation for those.

Let me know if there's anything else I can do to help.

Best,

Jessica

From: Tilean Clarke [mailto:████████████████████

Sent: Friday, May 10, 2013 1:18 PM

████████████████████████████

████████████████████

Subject: RE: Permission to use and adapt questionnaire, Pepper et al (2013)

████

Many thanks for your quick response.

I look forward to hearing from Jessica in due course.

Warm regards,

Tilean

█████████████

███

██████████████████████

Subject: RE: Permission to use and adapt questionnaire, Pepper et al (2013)

Date: Fri, 10 May 2013 17:16:16 +0000

Tilean,

Yes, we'd be delighted to share the survey with you. Jessica will be in touch in a few days with that.

████

██

Sent: Friday, May 10, 2013 1:14 PM

████████████████

██████████████████████

Subject: Permission to use and adapt questionnaire, Pepper et al (2013)

████████████████

I am currently preparing to conduct research in the UK on 'Adolescents views on the e-cigarette' as part fulfilment of my Professional Doctorate in Health Psychology. I am studying in the School of Psychology, London Metropolitan University, UK and my supervisor is Dr Joanne Lusher.

I have read the published article Pepper, J.K., Reiter, P.L., McRee,A.L., Cameron, L.D., Gilkey, M.B., & Brewer, N.T. (2013) Adolescent males' awareness of and willingness to try electronic cigarettes. *Journal of Adolescent Health.* 52(2), 144 – 150, and would like permission to take and adapt items from your questionnaire, when designing mine. I will ensure I acknowledge that my questionnaire items were taken and adapted from Pepper et al, 2013.

Please let me know your thoughts.

I look forward to your response.

 Warm regards,

Tilean Clarke

APPENDIX 3: LETTER OF INVITATION FOR SCHOOLS

Dear Head Teacher,

Re: Smoking Prevention Research and Workshop

I am a Trainee Health Psychologist and Trained Stop Smoking Advisor working towards a Doctorate in Health Psychology at London Metropolitan University.

I would like to invite your establishment to take part in a smoking prevention research project that I am currently doing as part of my course.

The research project is examining adolescents views on the e-cigarette, which are battery powered devices that convert nicotine into a vapour that can be inhaled.

1 in 7 fifteen year olds are regular smokers and the majority of all smokers initiate use prior to the age of 18.

Given the close resemblance of the e-cigarette to a traditional cigarette, e-cigarettes could be contributing to the normalisation of smoking in the public eye. It is therefore important to gain adolescents' views of the e-cigarette and determine what extent the e-cigarette could normalise and glamorise smoking.

I would like to organise a 45 minute smoking prevention workshop for young people, which will increase their knowledge and awareness on the risks of smoking and provide them with information on where people (including young people) can seek help and support to quit smoking. I will run the workshop and in this workshop, I will collect data using a questionnaire which will record adolescent's views of the electronic cigarette. The question will take no longer than 10 minutes.

Preventative efforts that target children and adolescents are imperative to prevent uptake of smoking and foster healthy lifestyle choices.

If you wish for your school to participate please confirm participation by email to TNC0009@my.londonmet.ac.uk stating the following:

➢ Name of establishment
➢ Contact person name
➢ Contact person phone number
➢ Any comments, questions or special requests

Please note: **Individual schools will not be identified in the research findings. There will be an option for pupils to opt out of the data collection. However all pupils will be able to participate in the workshop.**

Please confirm participation by (insert date).

Further details of the study are attached.

If you have any questions please contact the lead researcher Tilean Clarke on ▮▮▮▮▮▮▮

Yours Sincerely,

T. Clarke

Mrs Tilean Clarke
Trainee Health Psychologist
London Metropolitan University

APPENDIX 4: INFORMATION SHEET FOR SCHOOLS

RESEARCH INFORMATION FOR SCHOOL

A Survey Capturing Adolescents Views on the E-Cigarette

Researcher: Mrs Tilean Clarke, Trainee Health Psychologist, London Metropolitan University

Supervisor: Dr Joanne Lusher, Registered Health Psychologist, London Metropolitan University

What is the purpose of the study?

Using questionnaires, this study aims to gain an understanding of how UK adolescents perceive the e-cigarette, which are battery powered devices that convert nicotine into a vapour that can be inhaled. In the UK, it is estimated that there are 650,000 to 700,000 current adult users of e-cigarettes.

1 in 7 fifteen year olds are regular smokers and the majority of all smokers initiate use prior to the age of 18. Given the close resemblance of the e-cigarette to a traditional cigarette, e-cigarettes could be contributing to the normalisation of smoking in the public eye. It is therefore important to gain adolescents' views of the e-cigarette and determine whether the e-cigarette could be contributing to the normalisation and glamorisation of smoking.

Who is conducting the research?

The research is being conducted as part of a Doctorate in Health Psychology project by Mrs Tilean Clarke, in the School of Psychology, London Metropolitan University. The research is being supervised by Dr Joanne Lusher, Registered Health Psychologist and Course Leader of the Professional Doctorate in Health Psychology, London Metropolitan University. Tilean is a trained stop smoking advisor and has undergone a Criminal Records Bureau check at the Enhanced Disclosure level.

Why has our establishment been chosen?

We are looking for adolescents between 16 and 19 years old to take part in the study. Therefore, the study has reached out to sixth form secondary schools located in London to ask their permission to participate.

What do we have to do?

If you decide for your establishment to take part in the study, you will be required to:

➢ Inform the researcher, Tilean Clarke by (insert date) that you are interested in taking part
➢ Completing the attached consent form
➢ Organise one or several 45 minute smoking prevention workshop for young people between the ages of 16 - 19 years old. Each workshop must have a member of staff present

The researcher will provide all materials required for the study.

How will you obtain consent?

As an establishment you will be required to consent to being involved in this research study.

Ultimate consent will be taken from the participant.

How will you ensure the protection of our adolescents in this study?

All adolescents will be briefed verbally by the researcher at the beginning and end of the workshop and given a chance to ask questions. All adolescents can take part in the workshop, regardless of whether they decide to take part in the study.

Under no circumstances will information providing in the questionnaires, including the adolescence smoking status, be revealed to anyone other than the researcher.

All adolescents will be required to give their questionnaire to the researcher only.

Ethical approval for all elements of the project will be obtained from London Metropolitan University ethics committee.

Will taking part in this study be kept confidential?

Yes, taking part in this study will be kept confidential. Under no circumstances will names or information pertaining to the schools, youth groups or individual adolescents be passed on to anybody. All the information collected is kept strictly confidential. Identifying information will only be used in the consent process and will be stored in secure, lockable storage. Once the project is finished all identifying information will be destroyed. You will be notified in writing when the study is finalised. All survey data will be stored on a secure, password protected computer to which only the lead researcher will have access.

What will happen to the findings of the study?

The findings from the study will be presented in a Doctorate of Health Psychology thesis. It is also likely findings may be presented in reports, journal articles and presentations. Under no circumstances will names or information pertaining to the schools or individual adolescents be used when presenting the findings. **Individuals will be unidentifiable and names of establishments or people will not be used.**

Do we have to take part?

Your establishment and the adolescents are not required to take part. Taking part is entirely voluntary. Both the establishment and adolescents involved are free to withdraw participation at any time with no given reason.

Will there be payment for participating?

We are not able to offer any payment or incentive for participating in this study. Benefits of taking part include a free 45 minute smoking prevention workshop for young people between the ages of 16 - 19 years old, which will increase their knowledge and awareness on the risks of smoking and provide them with information on where people (including young people) can seek help and support to quit smoking.

How can I gain further information or ask question before I decide to take part?

If you have any questions or queries, please contact the lead researcher, Tilean Clarke on ▮▮▮▮ ▮▮▮▮▮▮ or by email to TNC0009@my.londonmet.ac.uk.

What happens next?

If you are happy to participate, please confirm participation by email to TNC0009@my.londonmet.ac.uk or by phone on ▮▮▮▮▮▮▮▮ stating the following:

➢ Name of establishment
➢ Contact person name
➢ Contact person phone number
➢ Any comments, questions or special requests

The researcher Tilean Clarke, will be in touch in the next week to follow up on your decision to participate and answer any questions you may have.

What if something goes wrong?

If you ever wish to make a formal complaint about the conduct of the research you should contact the researchers supervisor:

Dr Joanne Lusher PhD CSci CPsychol AFBPsS FHEA Registered Health Psychologist
Course Leader Professional Doctorate in Health Psychology
School of Psychology
London Metropolitan University
166-220 Holloway Road
London, N7 8DB

APPENDIX 5: CONSENT FORM FOR SCHOOLS

LONDON
metropolitan
university

CONSENT FORM

A Survey Capturing Adolescents Views on the E-Cigarette

Researcher: Tilean Clarke, Trainee Health Psychologist, London Metropolitan University

Thank you for agreeing to participate in this research study. The researcher, Tilean Clarke will provide your establishment with a smoking prevention workshop for young people between the ages of 16 - 19 years old, which will increase their knowledge and awareness on the risks of smoking and provide them with information on where people (including young people) can seek help and support to quit smoking.

During the workshop data will be collected using questionnaires on adolescent's views of the electronic cigarette. Only data obtained from the questionnaire will be used for research. Those adolescents who opt out of data collection will not fill in a questionnaire but can still access the workshop. You have the right to withdraw from the study at anytime.

By signing this consent form you certify that the establishment has agreed to participate.

Name: _____

Position/Title: _____

Organisation Name: _____

Location: _____

Signature: _____ Date: _____

APPENDIX 6: PRESENTATION USED FOR THE WORKSHOP

Mrs Tilean Clarke

Trainee Health Psychologist
London Metropolitan University

Session outline

- An overview of psychology, what it is and how to become one
- The importance of research
- The opportunity to take part in research
- Smoking and its effects on health
- Why people smoke and the most effective way to give up

What is a Psychologist

The different areas of psychology

- Forensic
- Sport and exercise
- Neuro
- Counselling
- Occupational
- Academia, research and teaching
- Educational
- Clinical
- Health

  and more…..

Steps to becoming a psychologist

- Gaining appropriate experience is also important

The importance of research

- Research is how we learn new things and understand peoples views

- It can contribute to:
  - Changes in legislation
  - Improving the healthcare system
  - Development of public health campaigns
  - Determining the areas we need to know more about

My research

- Aim: To learn young peoples views on the electronic cigarette

- Why: UK government do not fully understand how young people view the electronic cigarette. Findings from my research can help health professionals and the government understand young peoples views

My research

E-cigarettes look like regular cigarettes but they are different.

They create a mist that you breathe in like smoke, but they are not made with tobacco.

My research

- How: I would like you all to participate in my research by filling out a questionnaire. It has 15 questions. Question 16 will be done after.

- You do not have to participate and you have the right to not sign the consent form and submit a blank questionnaire

Your answers

- There are no right or wrong answers. The questionnaire is to understand your view.

- You will be asked about smoking, please be truthful.

- Your answers will NOT be shared with anyone.

- Your answers will be anonymous . Keep your unique ID number.

- Completing the questionnaire must be done in **silence.**

Steps to take

- You have a unique ID number on your consent form
  - Write this number in the box on the front of the questionnaire **and** on the unique ID slip
- Fill out the consent form
- Complete the questionnaire
- You will have 15 minutes
- Do not complete question 16 yet!

Question 16

- Write your unique ID number on this page

What's in a cigarette..

- When you smoke you inhale over 4000 chemicals including....

Smoking and its effect on health

- In the UK, around 114,000 people die every year from smoking-related illnesses

Shisha…

- **Shisha** smoking is a way of smoking tobacco through a bowl and hose or tube

- http://www.youtube.com/watch?v=R8DdzcaQfgE

Why do people smoke?

- Some people start smoking because:
  - They think it looks cool
  - Family and friends smoke
  - Cultural influence

- Many people continue to smoke because of:
  - ADDICTION

What's the best way to give up smoking?

- NHS Stop Smoking Service
  - 4 times more effective and FREE

- People can also get support from GP and pharmacy

For more information…

- British Psychological Society
www.bps.org.uk

- Smokefree
https://smokefree.nhs.uk/

APPENDIX 7: CONSENT FORM FOR PARTICIPANTS

Unique ID:

PARTICIPANT CONSENT FORM

A Survey Capturing Adolescents Views on the E-Cigarette

Researcher: Tilean Clarke, Trainee Health Psychologist

1.   I confirm that the researcher has explained the research study and I have had the opportunity to ask questions.   ☐

2.   I understand that my participation is voluntary and that I am free to withdraw from the study at any time, without giving reason.   ☐

3.   I agree to take part by completing the questionnaire   ☐

_____   _____

Name   Signature

_____
Date

APPENDIX 8: DEBRIEF FOR SCHOOLS

RESEARCH DEBRIEF FOR SCHOOL/YOUTH GROUP

A Survey Capturing Adolescents Views on the E-Cigarette
Researcher: Mrs Tilean Clarke, Trainee Health Psychologist
Supervisor: Dr Joanne Lusher, Registered Health Psychologist

What is the purpose of the study?
Using questionnaires, this study aims to gain an understanding of how UK adolescents perceive the e-cigarette, which are battery powered devices that convert nicotine into a vapour that can be inhaled. In the UK, it is estimated that there are 650,000 to 700,000 current adult users of e-cigarettes.

1 in 7 fifteen year olds are regular smokers and the majority of all smokers initiate use prior to the age of 18. Given the close resemblance of the e-cigarette to a traditional cigarette, e-cigarettes could be contributing to the normalisation of smoking in the public eye. It is therefore important to gain adolescents' views of the e-cigarette and determine whether the e-cigarette could be contributing to the normalisation and glamorisation of smoking.

Will taking part in this study be kept confidential?
- ➤ Yes, taking part in this study will be kept confidential.
- ➤ Under no circumstances will names or information pertaining to the schools, youth groups or individual adolescents be passed on to anybody.
- ➤ All the information collected is kept strictly confidential.
- ➤ Identifying information will only be used in the consent process and will be stored in secure, lockable storage.
- ➤ Once the project is finished all identifying information will be destroyed.
- ➤ You will be notified in writing when the study is finalised.
- ➤ All survey data will be stored on a secure, password protected computer to which only the lead researcher will have access.

Who can I contact now our participation has finished?

If you have any questions regarding this study, its purpose or procedures, please feel free to contact Dr Joanne Lusher, School of Psychology, London Metropolitan University, 166-220 Holloway Road, London, N7 8DB, Phone: 0207 133 2782, Email: j.lusher@londonmet.ac.uk.

Where can I find out more information on smoking and health?

If you would like further information on smoking and health or help to quit smoking than please contact the **NHS Smoking Helpline** on **0800 022 4 332**.

They have advisors available Monday - Friday 9am - 8pm, Saturday and Sunday 11am - 4pm.

Their website address is **http://smokefree.nhs.uk/**

APPENDIX 9: DEBRIEF FOR PARTICIPANTS

LONDON
metropolitan
university

RESEARCH DEBRIEF FOR PARTICIPANT

A Survey Capturing Adolescents Views on the E-Cigarette

Researcher: Mrs Tilean Clarke, Trainee Health Psychologist

Why did I complete a questionnaire?

Research is how we learn new things and understand people's views. As a trainee Psychologist, I am trying to find out young people's views on the electronic cigarette by asking them to complete the questionnaire.

By understanding how young people feel about electronic cigarettes, I can share this information with health professionals and the government.

Will my answers be shared with anyone else?

➤ Your answers will only be shared with the researcher. Your family, friends, school or anyone else will not know your answers

➤ The researcher will keep all answers safe, once the study is completed all consent forms will be destroyed

Can I change my mind and not be involved in this research?

➤ Yes you can change your mind at any time while the research is taking place. Just let your teacher/youth worker know to tell the researcher you have changed your mind. You do not need to give a reason why you changed your mind.

Where can I find out more information on smoking and health?

You can contact the **NHS Smoking Helpline** on **0800 121 4637.**

They have advisors available Monday - Friday 9am - 8pm, Saturday and Sunday 11am - 4pm.

Their website address is **http://smokefree.nhs.uk/**

All this information is on your NHS Smokefree Health and Wealth wheel too.

APPENDIX 10: STOP SMOKING SERVICE HEALTH AND WEALTH WHEEL

SECTION B2

SYSTEMATIC REVIEW

TRANSITIONING PATIENTS WITH INFLAMMATORY BOWEL DISEASE (IBD) FROM ADOLESCENT TO ADULT SERVICES
A SYSTEMATIC REVIEW OF THE LITERATURE

CONTENTS

ABSTRACT

More than 25% of Inflammatory Bowel Disease (IBD) patients are diagnosed before they reach 16 years of age presenting with more extensive distribution and severity of disease than adult onset of IBD. Given this, the individual disease variability and the lifelong treatment required, successful transition from adolescent to adult services is important to ensure individual treatment is guided and transition takes place causing minimal disruption to avoid stress induced recurrence. Currently, successfully transitioning patients with IBD from adolescent to adult services is an inconsistent process.

A comprehensive and systematic review of research carried out in any year was conducted in the databases PubMed, Medline, PsychINFO, Web of Science and the Cochrane Database of Systematic Reviews. In addition, a hand search of reference lists of relevant papers and narrative reviews was done to maximise the potential of finding all relevant papers.

Six studies met the inclusion criteria. Barriers to transition included system inadequacies prior to transition, lack of resources, clinical time and training. Principles of successful transition included joint medical visits, structured transition services and improved communication between paediatric and adult services. Suggestions for improvements included improved education for patients and providers.

The present review highlights the need for further research to be undertaken so that our understanding of the transition process for IBD and the factors that contribute to or impede a successful transition program can be strengthened. This could lead to improved clinical practice where there are defined protocols which ensure a smooth transition for every child, leading to minimal disruption in their care and better care standards.

BACKGROUND

Inflammatory Bowel Disease (IBD) is a group of inflammatory conditions of the gastrointestinal tract. A long term chronic disease, the primary subtypes of IBD are Crohn's Disease (CD) and Ulcerative Colitis (UC), where Ulcerative Colitis affects the colon only, while Crohn's disease can affect any part of the digestive system, from the mouth to the anus (Baumgart & Carding, 2007; Baumgart & Sandborn, 2007; Xavier & Podolsky, 2007). Indeterminate Colitis (IC) is used to describe the condition when it is difficult to ascertain whether the diagnosis should be Crohn's Disease or Ulcerative Colitis (Malaty, Mehta, Abraham, Garnett & Ferry, 2013; Prenzel & Uhlig, 2009). In the UK, there are approximately 240,000 people affected by IBD, 146,000 with Ulcerative Colitis and 87,000 with Crohn's Disease (Mowat, Cole, Windsor, Ahmad, Arnott, Driscoll et al, 2011).

The cause of IBD is unclear, but it is thought that the complex interaction of genetics and environmental factors play a part (Baumgart & Carding, 2007), with IBD more likely to be developed if a person has a close relative with the condition (Heyman, Kirschner, Gold, Ferry, Baldassano, Cohen et al, 2005; Russel & Satsangi, 2004). Other factors which have been suggested to contribute to diagnosis include abnormal reaction of the digestive system to bacteria in the intestine, possibly triggered by an environmental factors such as viruses and bacteria (Korzenik, 2005) and diet (Wu, Bushmanc & Lewis, 2013).

The main symptoms for both Crohn's Disease and Ulcerative Colitis include abdominal pain, diarrhoea, rectal bleeding, tiredness and fatigue, loss of appetite, weight loss, abscesses and fistulas (Mowat, Cole, Windsor, Ahmad, Arnott, Driscoll et al, 2011). Patients with IBD will have varying periods of good health and relapsed symptoms over the course of their lifetime (Mowat, Cole, Windsor, Ahmad, Arnott, Driscoll et al, 2011), also experiencing symptoms at a lower rate in remission (Lonnfors, Vermeire, Greco, Hommes, Bell & Avedano, 2014). Diagnosis generally includes the assessment of inflammatory markers in stool followed by colonoscopy with biopsy of pathological lesions and the aim of treatment is to reduce symptoms and the chances of a recurrence (Mowat, Cole, Windsor, Ahmad, Arnott, Driscoll et al, 2011) rather than curative intent. Depending on diagnosis, treatment includes pharmacological interventions such as anti-inflammatory drugs, steroids and immunosuppressants, nutrition interventions and in some cases surgery will be required (Mowat, Cole, Windsor, Ahmad, Arnott, Driscoll et al, 2011).

IBD can significantly impact on psychological well being and quality of life (Karwowski, Keljo & Szigethy, 2009; Knowles, Gass and Macrae, 2013; McCombie, Mulder & Gearry, 2013;), due to disease burden and its negative impact on psychological, social and sexual aspects of life (Mowat, Cole, Windsor, Ahmad, Arnott, Driscoll et al, 2011). Research suggests an interaction between IBD, depression and anxiety (Graff, Walker, Bernstein, 2009; Mikocka-Walus, Turnbull, Moulding, Wilson, Andrews & Holtmann, 2007), with stress also being associated with recurrence (Bernstein, Walker & Graff, 2006; Rampton, 2009).

IBD can be diagnosed at any age, however presentation often occurs at a young age (Heyman, Kirschner, Gold, Ferry, Baldassano, Cohen et al, 2005; Mowat, Cole, Windsor, Ahmad, Arnott, Driscoll et al, 2011; Prenzel & Uhlig, 2009), with onset between 15 - 35 years of age (Benchimol, Fortinsky, Gozdyra, Van den Heuvel, Van Limbergen & Griffiths, 2011) and more than 25% of cases diagnosed under the age of 16 years (Sawczenko & Sandhu, 2003). Presentation of IBD in young children and adolescents differs from adult onset, with more extensive distribution and severity of disease (Goodhand et al, 2010; Heyman et al, 2004). Patients diagnosed in adolescents are likely to experience 60 years of disease and frequent exposure to higher levels of diagnostic radiation, in addition to being at higher risk of associated malignancies (Desmond, O'Regan, Curran et al, 2010; Goodhand et al, 2010).

IBD symptoms profoundly affect children and adolescents (Lu & Markowitz, 2011; Decker, 2000; Nicholas, Otley, Smith, Avolio, Munk and Griffiths, 2007) with negative psychosocial consequences including stress, social strain, altered self image and self esteem (De Boer, Grootenhuis, Derkx and Last, 2005; Engstrom, 1999; Mackner & Crandall, 2006) which can affect performance in educational settings, relationships and psychosexual development (Goodhand et al, 2010; Lonnfors et al, 2014). Managing IBD in adolescent patients therefore needs to encompass more than just medical therapies and a multidisciplinary team is recommended to ensure a holistic approach to treatment (Bishop et al, 2014).

Smooth transition from adolescent to adult service is vital to ensure individual treatment is guided and transition takes place causing minimal disruption to the adolescent's illness to avoid recurrence (Karwowski et al, 2009). Transition is the purposeful, planned movement of adolescents and young adults with chronic physical and medical conditions from child-centred to adult orientated healthcare systems (Blum, Garell, Hodgman, Jorissen, Okinow, Orr et al, 1993; Department of Health, 2006). Transition of patients with IBD from paediatric to adult service varies, although it usually happens when the young person is aged 16-19 years (Mowat et al, 2011). Those managing transition must ensure readiness to change, as patients aged 18 years, in some cases, are still assisted by their parents in managing their treatment and care (van Groningen, Ziniel, Arnold & Fishman, 2012). Despite recent UK guidelines suggesting the need for defined policy and protocol (Mowat et al, 2011) and the need to understand the barriers to successful transition (Bollegala, Brill & Marshall, 2013; Goodhand, Hedin, Croft & Lindsay, 2011), there is no review that systematically draws together the empirical evidence on IBD and transition, on which policy and protocols can be based. Taking into account the perspectives of patients, parents/carers and health professionals, such as gastroenterologists, to inform of appropriate service development and implementation is essential when developing policies and protocols suitable for all parties involved.

To date, three systematic reviews of transition from adolescent with a chronic illness to adult services have been conducted, all of which highlight challenges in transition and suggestions for

improvement, but none of these reviews have included studies which encompass the perspectives of transition from a health professional's perspective, an important component when aiming to address successful transition from adolescent to adult care (Betz, 2013). One systematic review of 35 studies on adolescents and emerging adults with special healthcare needs perspectives of healthcare transition, in which two of the studies included in the review had patients with IBD, highlighted the complexity of the process, in which some studies identified the process as positive in terms of growth and responsibility for their chronic condition, with other studies identifying the transition period as challenging in terms of uncertainty of services and also long term health status (Betz, Lobo, Nehring and Bui, 2013). Supporting the latter, the negative impact of transition was identified in a qualitative meta-synthesis of adolescents' and young adults' transition experiences, where common themes included loss of familiarity, insecurity and unpreparedness across the 18 studies scrutinised (Fegran, Hall, Uhrenfeldt, Aagaard & Ludvigsen, 2014). Although IBD was not the focus of any of the studies included in the review, findings on perspectives of transition were found to be comparable across chronic illnesses. Both reviews highlighted some key challenges faced by patients, but neither focused on the perspective of health care professionals.

The third systematic review of 10 studies (8 with diabetes mellitus patients, 1 with cystic fibrosis patients and 1 with organ transplant recipients) examined interventions during the period of transition from paediatric and adult services of those with chronic illness (physical or mental) or disability, which found only studies investigating diabetes mellitus identified interventions as successful, making it difficult to draw conclusions across chronic conditions (Crowley, Wolfe, Lock & McKee, 2011), such as IBD. This review highlighted important areas of future consideration, but again its focus on interventions meant this review also was unable to capture the varying perspectives of transition from adolescent to adult services.

The systematic review reported here offers a comprehensive analysis of the opinions of patients, parents and health professionals and the process of transition with a specific focus on patients with IBD diagnosed in childhood. The reason for the specific focus on IBD is due to the complexity of illness and the varying nature of the chronic condition in adolescent onset and adult onset, which leads to variations in treatment, different to other chronic illnesses. An in-depth review of this complex chronic illness will look to address how successful transition should occur for this patient group shedding some light on barriers to and principles of successful transition for IBD patients. The outcome of this review aims to contribute to the development of policies specifically for IBD transition of care and could also identify related clinical recommendations. The process of successfully transitioning patients with IBD from adolescent to adult services is currently inconsistent (Bollegala et al, 2013; Goodhand et al, 2011; Leung et al, 2011; Mowat et al, 2011; Rao, Ashok, Azaz & Sebastian, 2012), despite a high proportion of IBD being diagnosed in childhood and the unique health needs of patients at a precarious period in their lives, when they have to cope with the stresses of being a maturing person (Frech 2014; Hartmann and Swartz, 2007).

The specific questions addressed in this review were:

- What are the barriers to and principals of successful transition of IBD patients from adolescent to adult services?
- What are the opinions of health care professionals on transition of IBD patients and how does it compare with the views and experiences of service users
- What methodological issues arise in studies of transition of IBD patients from adolescent to adult services?
- What recommendations can be offered?

METHODS

ELIGIBILITY CRITERIA

To fulfil the purpose of this review, studies were included if they met the following criteria:

- Studies investigating transition from paediatric to adult services
- Studies investigating IBD (Crohn's Disease, Ulcerative Colitis or Indeterminate Colitis)
- Studies written in English
- Studies conducted in any year
- Full length studies published in peer review journals
- Primary studies, using either retrospective or prospective design and either quantitative and/or qualitative design

Studies were excluded if:

- The primary focus was not IBD
- It was a commentary, editorial or case study on transition

There were no restrictions on variables such as culture, stage of illness, occupational class or education.

SEARCH STRATEGY

The search strategy involved systematically reviewing subject specific databases PubMed, Medline, PsychINFO, Web of Science and the Cochrane Database of Systematic Reviews. Each database was searched using the following search terms and combined with Boolean operators:

1. Inflammatory bowel disease
2. IBD
3. Crohn's Disease
4. Colitis
5. #1 OR #2 OR #3 OR #4
6. adolescen*
7. teen*

8. youth
9. young
10. #6 OR #7 OR #8 OR #9
11. transition
12. transfer
13. #11 OR #12
14. #5 AND #10 AND #13

The search strategy aimed to maximise the potential of finding all relevant papers. In addition to this search strategy, a hand search of the reference list of relevant papers and narrative commentaries on healthcare transition was performed. The search was conducted in March 2014.

SELECTION PROCESS

All titles and abstracts retrieved were screened for potential eligibility by one reviewer. The full text of potential articles was then examined by two reviewers to determine eligibility for inclusion in the review using pre-designed study eligibility verification forms (see appendix 1, p. 131-144). The data was then collated and an ID number was given to each study for easy identification throughout the review (see table 1, p. 115).

STUDY QUALITY

The quality of the selected studies was then assessed by two reviewers using the Quality Assessment Tool for Quantitative Studies that was developed by the Effective Public Health Practice Project (EPHPP, 2004). Quality was assessed using the six components of the assessment tool, selection bias, study design confounders, blinding, data collection method and withdrawals and drop-outs. The studies were rated as strong, moderate or weak for each criterion according to the Quality Assessment Tool for Quantitative Studies Dictionary (EPHPP, 2004) and then given a global rating, which scored studies as strong, moderate or weak overall, depending on ratings for the individual components. The ratings for each paper are shown in table 2 (p. 118-121).

Although the included studies were all of quantitative nature, it was concluded that a meta analysis would not be an appropriate way of evaluating the findings as the included studies differed in the study aim and outcome measures, plus the quality assessment revealed the majority, five out of six studies, were of weak quality. The heterogeneity of the reports meant that no meaningful outcome would have come from pooling the data.

TABLE 1: QUALITY ASSESSMENT RATINGS OF THE INCLUDED STUDIES

ID	Selection Bias	Study Design	Confounders	Blinding	Data Collection Method	Withdrawals and Dropouts	Global Rating
1	Weak	Moderate	Weak	Moderate	Strong	Weak	Weak
2	Moderate	Weak	Weak	Moderate	Weak	Weak	Weak
3	Weak	Weak	Weak	Moderate	Weak	Weak	Weak
4	Weak	Weak	Strong	Moderate	Weak	Weak	Weak
5	Weak	Weak	Weak	Moderate	Weak	Weak	Weak
6	Moderate	Moderate	Strong	Moderate	Strong	Weak	Moderate

RESULTS

The search strategy produced 283 potentially relevant papers (see Figure 1, p. 116 for selection process), 124 duplicates were removed from the list, leaving 159 titles and abstracts to be screened, 141 were excluded because there title or abstracts appeared to be about topics outside of the review's focus and a further 12 studies were excluded as they were synopsises. Six full text papers were retrieved and examined by two reviewers to determine eligibility to be included in the review, all of which were included as they examined the transition of IBD patients from paediatric to adult care and met the other aspects of the inclusion criteria. A manual search of the references of the 6 studies for inclusion, in addition to narrative commentaries on transition of care, revealed no further studies for inclusion. Therefore 6 studies met the inclusion criteria and were included in this systematic review.

MAIN AIMS OF THE STUDIES

All studies ultimately explored transition of IBD patients from adolescent to adult services, however there were variations in the studies as detailed in table 2. One looked at resource utilization in the year prior to transfer and the first year of transfer (study 1), another study explored patients and parents perspectives (study 2) and another study investigated the effect of age on onset of IBD and the specific problems posed to make recommendations for transition clinics (study 6). The remaining studies investigated transition from a healthcare perspective, using gastroenterologists, to assess perceived needs and barriers to successful transition (studies 3, 4 & 5).

Figure 1: Flowchart of the selection process

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                              ┌─────────────────────────┐
                              │  Studies identified through│
                              │    database searching    │
                              │       (n = 283)          │
                              └─────────────────────────┘
        ┌──────────────────┐            │
        │ Records after    │            ▼
        │ duplicates       │  ┌─────────────────────────┐   ┌─────────────────────────┐
        │ removed          │  │ Number of titles and    │   │ Exclusion of irrelevant │
        │ (n = 124)        │  │ abstracts screened      │──▶│ titles and abstracts    │
        └──────────────────┘  │     (n = 159)           │   │      (n = 153)          │
                              └─────────────────────────┘   └─────────────────────────┘
                                         │
        ┌──────────────────┐            ▼
        │ records          │  ┌─────────────────────────┐   ┌─────────────────────────┐
        │ identified       │  │ Retrieval of full       │   │ Full text articles      │
        │ through hand     │  │ articles to assess      │──▶│ excluded, with reason   │
        │ searching        │  │ relevance for review    │   │      (n = 0)            │
        │ (n = 0)          │  │     (n = 6)             │   └─────────────────────────┘
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                        \     ┌─────────────────────────┐
                         ───▶ │ Studies included in     │
                              │ this review             │
                              │     (n = 6)             │
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PARTICIPANTS INCLUDED IN THE STUDIES

Of the six studies included in this review, three studies focused on transition of IBD patients from adolescent to adult care using IBD patients as their participants (studies 1, 2 & 6) and three studies focused on transition using gastroenterologists as their participants to explore the transition process for IBD patients (studies 3, 4, 5). Study 6 was the only study to have a control group which was a matched group of 100 adults with IBD. Of the studies using gastroenterologists, 876 were surveyed, 107 paediatric gastroenterologists and 769 adult gastroenterologists. Two studies used paediatric and adult healthcare professionals (studies 4 & 5), where as the other used adult gastroenterologists only (study 3). There were three studies which used IBD patients, so a total of 229 transitioning adolescent IBD patients were included, with a mixture of those with Crohn's disease (n = 151), those with Ulcerative Colitis (n = 65) and one study included patients with Colitis of Undetermined Type and Aetiology (n = 13) (study 6). All of these studies focused on patients based in one specific unit (studies 1, 2 & 6) and of these three hospitals, two had a fixed transition age of 18 years (study 1) and 16 years (study 6) and the other adopted a more flexible approach with a mean age of transition of 18 years (study 2). Two studies reported their sample in terms of gender (studies 1 & 6).

METHODS USED BY THE STUDIES

All studies were of quantitative nature, using retrospective designs. Two studies adopted a chart review method (studies 1 & 6), as opposed to self reported survey which the remaining four studies used (studies 2, 3, 4, 5) and all studies reported varied outcomes. Of the four survey designed studies, three used post only as a method of distribution (studies 2, 3, 4), of which one used post

and email (study 3) and the other was a web based survey design (study 5). Only one study included their survey as an appendix in their full text article (study 4). All survey studies only made one attempt to retrieve surveys from participants and response rates ranges from 34% (study 3) to 71% (study 2).

STUDY QUALITY

The majority of studies received a global rating of weak (studies 1-5) (see table 2), with study 6 receiving a moderate global rating. Four of the studies were rated as weak with regards to selection bias (studies 1, 3, 4, 5), as the response rate was low (studies 3, 4 & 5) or not applicable for the chart review study (study 1). Study 2 was rated at moderate as the response level was higher and study 6 was rated as moderate as the individuals selected were representative of the target population. Studies using a retrospective survey design were rated as weak (studies 2-5) and study 1 and 6 received a moderate rating as they used a cohort design and case control respectively. Only study 4 and 6 accounted for confounders and therefore received a rating of strong and all remaining studies were rated as weak (studies 1, 2, 3 & 5), as they did not account for confounders such as diagnosis, age or co-morbidities. All studies received a moderate rating for blinding as blinding was not described. For most studies ratings for data collection method were weak as four studies used self reported data (studies 2, 3, 4 & 5), with no documented attempt to show that the tools measured what they intended to measure or that they were consistent and accurate in measuring the outcomes of interest. Those with strong ratings for data collection method used medical records (studies 1 & 6), None of the studies reported the details of participants who withdrew and as the studies were retrospective survey design or case review, the drop out criteria did not apply, therefore they were all rated weak for this criterion.

TABLE 2: TABLE OF INCLUDED STUDIES

Author, date, country	Research aims/questions	Participants	Design method	Key findings	Suggestion*
1. Bollegala, N., Brill, H. & Marshall, J. K. (2003), Canada	Resource utilization during transfer of care in IBD	N = 95 (47 male, 48 female) (69 CD, 26 UC). Average age of diagnosis 12.9 years. Age at transition 18 years.	Retrospective chart review between 1999 to 2008. Resource utilization compared during year before transfer and year after transfer.	Disease activity higher during paediatric care. Adult care = few clinic visits (p < .05), more documented non compliance (p < .05)	Comprehensive transition programs that address these shortfalls are needed to optimize care.
2. Dabadie, A., Troadec, F., Heresbach, D., Siproudhis, L., Pagenault, M. & Bretagne, J. F. (2008), France	Explore the way patients and parents perceive transition of care in IBD	N = 34 (28 CD, 6 UC). Average age at diagnosis 11.8 years. Mean age at transition 18 years.	Retrospective survey for patients who visited a transition centre from 1988 - 2005 and a separate survey for their parents. Survey sent to 48, response rate 71%.	85% of patients and 74% of parents felt they were ready for transition. All patients rated joint visits as beneficial for transferring records and 93% considered them helpful in building confidence in new gastroenterologist. 79% of parents visited adult care with their child.	Effective planning, including a joint medical visit enabled successful well co-ordinated transition.

*This highlights at least one suggestion made by author   CD = Crohn's Disease UC = Ulcerative Colitis

TABLE 2 (cont'd): TABLE OF INCLUDED STUDIES

Author, date, country	Research aims/questions	Participants	Design method	Key findings	Suggestion*
3. Hait, E. J., Barendse, R. M., Arnold, J. H., Valim, C., Sands, B. E., Korzenik, J. R. and Fishman, L. N. (2008), America	Explore the perspectives of adult gastroenterologist on improving transition of care in IBD	N = 363 adult gastroenterologists (85% male, 69% private practice, 62% > 15 years experience)	Retrospective survey of adult gastroenterologists. Survey sent to 1132, response rate 34%.	Important factors were knowledge of medical history (55%) and medical regime (69%). 51% received inadequate medical history from paediatric providers. 19% were less concerned about the patient's ability to identify previous healthcare providers or attend visits themselves (15%). 46% felt competent addressing developmental aspects relating to adolescents.	Further training for adult providers in adolescent issues, formal transition checklist, education on diagnosis and medical history for patients.
4. Sebastian, S., Jenkins, H., McCartney, S., Ahmad, T., Arnott, I., Croft, N., Russell, R. & Lindsay, J. O. (2012), UK	Identify perceived needs and barriers to successful transition	82 paediatric gastroenterologists and 358 adult gastroenterologists	Retrospective survey sent to 132 paediatric gastroenterologists and 729 adult gastroenterologists. Response rate was 62% and 49% respectively.	A structured transition service was perceived very important - 80% paediatric vs. 47% adult (p < 0.01). Age was an important criterion with suggested age being 16 years (56% paediatric and 70% adult) and 18 years old (82% paediatric and 81% adult). 43% of paediatric suggested transition during remission vs. 12% adult. 79% of adult services identified inadequacies in preparation of transition vs. 42% in paediatrics. Main areas of perceived deficiency in preparation	Bridge the gaps between paediatric and adult gastroenterologists and addressing training deficiencies may help remove barriers to transition.

*This highlights at least one suggestion made by author   **CD = Crohn's Disease UC = Ulcerative Colitis**

TABLE 2 (cont'd): TABLE OF INCLUDED STUDIES

Author, date, country	Research aims/questions	Participants	Design method	Key findings	Suggestion*
				by adult gastroenterologist were patient lack of knowledge about condition, treatment and co-ordination of care, for paediatric it was problems in self advocacy and co-ordination of care. Lack of resources, clinical time and critical mass of patients were key factors by both groups as barriers to transition care. Adult 65% and paediatric 62% suggested training in adolescent medicine for adult gastroenterologists.	
5. Wright, E., Williams, J., Andrews, J., Day, A., Gearry, R., Bampton, P. et al. (2014), Australia and New Zealand	Explore the perceived needs of gastroenterologists and identify barriers to effective transition	N = 73 (66% adult, 34% paediatric). 10% New Zealand, 90% Australian.	25 item web-based survey. Response rate of 41%.	Psychological maturity, self-efficacy and readiness as assessed by adult caregiver were important factors in determining timing of transfer. Poor medical and surgical handover and patients lack of responsibility for their own care were perceived as major barriers to successful transition by both paediatric and adult gastroenterologists.	Standardizing transition care practices with strategies aimed at optimizing communication, patient education, self-efficacy and adherence may improve outcomes.

*This highlights at least one suggestion made by author   CD = Crohn's Disease UC = Ulcerative Colitis

TABLE 2 (cont'd): TABLE OF INCLUDED STUDIES

Author, date, country	Research aims/questions	Participants	Design method	Key findings	Suggestion*
6. Goodhand, J., Dawson, R., Hefferon, M., Tshuma, N., Swanson, G., Wahed, M. et al (2010), UK	Investigate the effect of age of onset of IBD and highlight specific problems posed for adolescents and adults.	100 adolescents in a transition clinic were matched to 100 adults. Disease duration was comparable to both groups, median 4 years (range 3-6 years). Median age at diagnosis was 15 years (range 3 - 26 years) for adolescent group and 39 years (range 13 - 82) for the adult group.	Retrospective case notes review versus control with a follow up period of 5 years.	Crohn's disease was significantly more common in the adolescents. Disease distribution was ileocolonic in 69% of adolescents and 28% of adults, restricted to the ileum in 20% of adolescents and 47% of adults, and colonic only in 11% and 22%, respectively. Upper gastrointestinal involvement occurred in 23% of adolescents, but was not seen in adults ($P < 0.01$). Total ulcerative colitis was seen in 67% of adolescents and 44% of adults ($P < 0.01$). Contrary to previous data adolescents did not receive more ionizing radiation than adults. Requirement for immunosuppressive therapy was higher in the adolescent group (53% versus 31%, respectively, $P < 0.01$). Likewise, 20% of adolescents had required biological therapy compared to only 8% in the adult cohort ($P < 0.05$).	Recommendation of transition clinics, as without a transition clinic, the adult gastroenterologist will inherit a group of patients with severe disease, many of whom have ongoing inflammation and who have failed multiple therapeutic regimes.

*This highlights at least one suggestion made by author   **CD = Crohn's Disease UC = Ulcerative Colitis**

SUMMARY OF FINDINGS

Overall, the results illustrate mixed findings, however all studies identify a need for either IBD transition of care policies, training for adult gastroenterologist, or specific IBD transition programmes or clinics, as summarised in figure 2 (p. 125).

Figure 2: Summary of findings

- Six retrospective quantitative studies were included.
- Five studies had a weak global quality assessment rating and one study a moderate rating.
- Overall, the results illustrate mixed findings, however all studies identify a need for either IBD transition of care policies, training for adult gastroenterologist, or specific IBD transition programmes or clinics.
- Barriers to successful transition include inadequacies in the preparation of adolescents for adult services defined by the adult gastroenterologists, lack of resources, clinical time and training needs as identified by both paediatric and adult providers.

Six studies met the review criteria, highlighting not only a shortage of research that has focused specifically on transition of IBD patients from adolescent to adult services, but also the difficulty in drawing any firm conclusions in which policies or clinical procedures to manage transition in IBD can be drawn. However, barriers to and principles of successful transition were identified in the limited amount of research that was available for review. Barriers included inadequacies in the preparation of adolescents for adult services defined by adult gastroenterologists, a lack of resources, clinical time and training needs identified by both paediatric and adult healthcare providers.

Several studies identified in this review provide suggestions on achieving successful transition, such as adult gastroenterologists understanding the complexity of IBD diagnosed in childhood (study 6) and paediatric gastroenterologists understanding the needs of adult providers. In addition, improved education about medical history and treatment to empower patients (studies 3, 4 & 5), improved education for adult providers on adolescent issues (studies 3 & 4) and formal transition checklists (study 3) were suggestions for improvement.

Studies supported the creation of specific adolescent transition clinics (studies 6 & 1), fearing adult gastroenterologist would inherit patients with severe disease, multiple failed treatment regimes (study 6) and patients with increased non adherence and poor clinic attendance (studies 6 & 1). Principles of successful transition were described as a structured transition service (study 4) or the use of joint medical visits that were beneficial for both patients and parents in terms of transitioning information building confidence in new gastroenterologist (study 2). Improving communication between paediatric and adult healthcare providers (study 3) was also emphasised.

Two out of three studies in this review that focused on patients rather than health professionals had a mean age of transition of 18 years and the other study transition took place at 16 years. None of these studies investigated readiness to transfer, despite research suggesting age and disease remission as possible factors of consideration (Karwowski et al, 2009; van Groningen et al, 2012), which study 5 also reported as an important component of successful transfer by both paediatric and adult professionals. Future considerations for studies conducted in a transition clinic, would be that a full explanation of the processes used in the clinic are included to draw conclusions or make comparisons, as done in study 1.

DISCUSSION

The aim of this review was to investigate the barriers to and principals of successful transition of IBD patients from adolescent to adult services. The review also aimed to highlight methodological issues arising in such studies and provide recommendations for future research.
Supporting previous evidence that IBD is more severe in adolescents than adulthood (Goodhand et al, 2010; Heyman et al, 2004), this review highlights the need for effective transition on this basis.

However, the current review is limited by the methodological quality of the studies included. The use of convenience and purposive sampling was adopted for all included samples making it difficult to draw conclusions that were representative of all IBD patients, similar to previous reviews on transition (Betz et al, 2013; Crowley et al, 2011). The sample sizes of studies included in the review varied, with studies using patient population having smaller sample sizes (n < 100), than those using health professionals (n > 300), likely due to the method of recruitment of participants. However, regardless of variations in sample sizes all studies were relatively small and none of the studies calculated the necessary sample size needed to detect statistically significant difference.

Another similarity to previous reviews on transition is the limited use of valid and reliable measurements, particularly in the studies adopting a survey design. Survey studies used five point Likert scales to draw conclusions on the strengths of an opinion, making it difficult to fully understand the response due to the uni-dimensional approach providing only a certain amount of choice for the participants. Lack of reliable and valid tools makes it difficult to compare studies and to use measurement tools in other studies. The two case note review studies did use specific measures to quantify disease activity, study 6 measured disease extent using the Montreal Classification (Silverberg, Satsangi, Ahmad et al, 2005, cited in Goodhand et al, 2010) and study 1 measured disease activity using the Harvey Bradshaw Index for CD (Best, 2006, cited in Bollegala et al, 2013), the Paediatric Ulcerative Colitis Activity Index (Turner, Otley, Mack et al, 2007, cited in Bollegala et al, 2013) and the Ulcerative Colitis Disease Activity Index (D'Haens, Sandborn, Feagan et al, 2007, cited in Bollegala et al, 2013). Despite this, case note reviews also suffer from weak methodological quality as they are subject to discrepancies in interpretation and missing data. Case control studies are also limited by their design due to the difficulty of obtaining reliable

information, but could be considered more reliable than retrospective survey designs, which are limited due to the self reported nature of measurement, leaving them open to bias. Survey studies are also limited due to non response and low response rates, making generalisation difficult.

These issues of methodological quality led to the majority of studies being rated as weak according to the quality assessment tool for quantitative studies (EPHPP, 2004), with the exception of study 6, whose quality was assessed as moderate, this was due to its ability to control and account for a large number of confounders such as disease type, location and behaviour, patient age at diagnosis, disease duration, gender, ethnicity and smoking status, compared to other studies included in this review.

The methodological issues raised with this review are comparable to other reviews on transition (Betz et al, 2013; Crowley et al, 2011). A strength in the present review is how it draws on the perspective of health professionals when investigating the barriers to and principals of successful transition. Future studies are needed that capture the needs and attitude of health professionals both paediatric and adult in IBD and other chronic conditions.

Following the addition of further research a future systematic review on transition from adolescents to adult services for other chronic illnesses that encompasses healthcare providers perspectives would be beneficial. This is an additional important component necessary for successful transition and not included in other previous reviews (Betz et al, 2013; Fegran et al, 2014). The perspectives of patients, families and both paediatric and adult healthcare providers is important when determining the most appropriate processes for transition with the aim of developing mutually agreed transition programmes, ensuring a holistic approach to treatment (Bishop et al, 2014).

Additionally, future research should consider randomised control studies on the benefits of transition clinics, variations in models of transition and approaches to management of IBD in adulthood for those diagnosed in childhood in order for effective policies and clinical practice to be based on. Studies should recruit larger, more representative samples, be prospective rather than retrospective designs and use tools in which reliability and validity is accounted for and documented clearly. Longitudinal studies to measure the impact of transition over the longer term would also be useful. Also clear patient outcomes including rates of clinical and endoscopic remission, steroid use, surgery, hospitalisation and quality of life, in addition to cost effectiveness, should be evaluated in future studies to provide a clearer picture on the health gains of transition clinics.

In terms of clinical practice, the evidence at the point of conducting the systematic review is limited, predominately because of methodological factors. Other limitations this review presents is that only full length published studies were included, which may have resulted in publication bias. The strength of the review is focusing on IBD. Should there have been more available studies and studies of high quality this focus would have helped paint a picture of areas for improvement for

transition of IBD patients specifically, a chronic illness which is markedly different in comparison to other more common diseases, in terms of its severity and individuality in presentation and treatment course for patients (Goodhand et al, 2010; Heyman et al, 2004). This review demonstrates the need for further research into adolescents with IBD and transition in order for clinical practice to be strengthened. Also with no qualitative studies identified in this review, future qualitative research would be beneficial to further understand transition from the perspectives of IBD patients, their parents and health professionals.

As there are many limitations to this review, few concrete conclusions can be made. There are many avenues for further research in this area to improve our understanding of the transition process for IBD and the factors that contribute to or impede a successful transition program. This would lead to improved clinical practice where there is defined protocol which ensures smooth transition is in place for every child, leading to minimal disruption in their care and better care standards for the patients and more effective policies.

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APPENDICES

APPENDIX 1: DATA EXTRACTION

Authors: Bollegala, Natasha and Brill, Herbert and Marshall, John K.

Title: Resource utilization during pediatric to adult transfer of care in IBD

Year: 2013

Does the paper (tick only if yes applies):

▣   Examine transition from paediatric to adult services

▣   Focus on adolescents or young adults diagnosed with IBD

            (Crohn's Disease, Ulcerative Colitis or Indeterminate Colitis)

▣   Primary study

Stop here if any of the answers above is No.

Study characteristics Aim/objective of the study Study design Recruitment procedures used	Aim to examine resource utilization during paediatric to adult transfer of care in IBD patients. Retrospective chart review.
Participant characteristics Sample size Age Gender Diagnosis	Patients transferred between 1999 to 2008 were studied. Inclusion criteria was 1) confirmed diagnosis of IBD, 2) provision of ongoing care by paediatric gastroenterologist before the age of 18, 3) provision of ongoing care by adult gastroenterologist. 95 patients were identified (48 female, 50.5%), (69, 72.6% Crohn's disease and 26, 27.4% Ulcerative colitis) Average age of diagnosis was 12.9 years. Method of practice in clinic: Paediatric patients with IBD are followed by paediatric providers until they are 18. When they turn 17, consultation is made to an adult gastroenterologist, with an average waiting time of 6–9 months. A transfer note usually accompanies the transfer of care. Once patients see the adult gastroenterologist, they have one more appointment with the paediatric gastroenterologist around their 18th birthday, at which point transfer is considered complete.
Main methods and outcome measures	Utilization of health resources one year before transfer and one year after transfer was compared. Primary outcomes included: i) emergency department (ED) visits; ii) hospitalizations; iii) endoscopies; iv) surgeries; and

	v) clinic visits. Secondary outcomes included: i) documentation of non-compliance (when medical document noted non-adherence to prescribed medication, failure to comply with an investigation ordered by a physician or failure to attend a scheduled clinic appointment); ii) reason for ED visit; iii) diagnosis most responsible for hospital admission; iv) medications; v) indication for surgery; vi) endoscopic findings; and vii) disease activity. The latter was measured using the Harvey Bradshaw Index (HBI) for CD and the Paediatric Ulcerative Colitis Activity Index (PUCAI) and Ulcerative Colitis Disease Activity Index (UCDAI) for paediatric and adult UC.
Main findings	Over their adult care few clinic visits (2.56 versus 3.05, p <0.05) and more documented non compliance (43% vs 29%, p < 0.05). Average disease activity was higher during the paediatric care interval than following transition to adult care. No difference in emergency department visits, hospitalization, surgical intervention, endoscopies were observed.
Summary (including strengths and weaknesses)	Summary - difficult to make conclusions on reasons for reduced number of scheduled appointments with adult clinicians and lower compliance in first year of adult care, however it is possible that adolescents feel more comfortable with their paediatric care providers and therefore are more forthcoming with their symptoms, yielding higher disease activity scores. It is also a possibility that more adolescents present with their parents to paediatric appointments compared to adult appointments and it is their parents who drive the reporting of symptoms. The last year of paediatric care may also be more stressful given patients are anticipating transfer. Lower prevalence of disease activity observed in early adult care could reflect a more aggressive investigational approach by adult care providers. This may also reflect the appropriate re-staging of disease by adult provider or paediatric preference to defer scheduled procedures until after transfer.

	Limitation - retrospective study therefore data collection and analysis are limited to information recorded during routine course of clinical care. Sample size is relatively small and does not capture patients who transitioned to adult care at other centres.

Authors: Dabadie, A. and Troadec, F. and Heresbach, D. and Siproudhis, L. and Pagenault, M. and Bretagne, J.-F.

Title: Transition of patients with inflammatory bowel disease from pediatric to adult care

Year: 2008

Does the paper (tick only if yes applies):

☑   Examine transition from paediatric to adult services

☑   Focus on adolescents or young adults diagnosed with IBD

           (Crohn's Disease, Ulcerative Colitis or Indeterminate Colitis)

☑   Primary study

Stop here if any of the answers above is No.

Study characteristics Aim/objective of the study Study design Recruitment procedures used	This study was designed to ascertain the perception of patients (and their parents) followed-up for inflammatory bowel disease (IBD) concerning the transition from paediatric to adult care. France
Participant characteristics Sample size Age Gender Diagnosis	N = 48 (37 male, 11 female), (38 Crohn's Disease, 10 Ulcerative or non classifiable colitis), (mean age 12 +/- 2.2 years). All participants had transferred from paediatric to adult care (age at transition 17.9 +/- 0.9, range 15.5 - 20.5 years), time of transition 26 patients were in secondary school and 11 in higher education. 71% transferred within the same centre, whilst 29% transferred care to private gastroenterologist. 79% of patients had a joint visit before transfer. those who had joint visit had more active disease during paediatric follow up.
Main methods and outcome measures	Retrospective evaluation of transition. Postal survey, one for patients one for parents. Response rate was 71% (34 patients and 34 parents, including one patient alone and one set of parents alone). For patients survey was in three parts, current medical situation, opinion of transition procedures and opinion of joint visit (if relevant) between paediatric and adult care. Parent survey was two parts, opinion of transition process, and opinion of joint visit. Multiple choice questions with space for additional comment.

	Demographic data was taken from medical chart.
Main findings	29 patients (85%) and 25 parents (74%) felt they were ready to transit into adult care. 7 patients (22%) and 10 parents (32%) were apprehensive about transition to adult care. All patients considered the joint medical visits beneficial in terms of transmitting information from medical records and 93% considered it beneficial for building confidence in the new gastroenterologist. All parents considered it beneficial in building confidence in new doctor. 79% of parents visited the adult care with their child. Patients who had the joint visit felt transition was imposed on them and were slightly more frequently apprehensive about the transition.
Summary (including strengths and weaknesses)	Effective planning including a joint medical visit, enabled successful well co-ordinated transition. Weakness - the study only reviews patients visiting one centre from 1988 - 2005. The questionnaire did not allow detailed discussion about procedures that would have been preferred.

Authors: Hait, Elizabeth J. and Barendse, Ren\'{e}e M Renee M. and Arnold, Janis H. and Valim, Clarissa and Sands, Bruce E. and Korzenik, Joshua R. and Fishman, Laurie N.

Title: Transition of adolescents with inflammatory bowel disease from pediatric to adult care: a survey of adult gastroenterologists

Year: 2009

Does the paper (tick only if yes applies):

☑ Examine transition from paediatric to adult services

☑ Focus on adolescents or young adults diagnosed with IBD
(Crohn's Disease, Ulcerative Colitis or Indeterminate Colitis)

☑ Primary study

Stop here if any of the answers above is No.

Study characteristics Aim/objective of the study Study design Recruitment procedures used	Aim - explore the perspectives of adult gastroenterologists caring for adolescents and young adults with IBD to improve transition of care. Retrospective survey design by post and email American study
Participant characteristics Sample size Age Gender Diagnosis	N = 1132 adult gastroenterologists sourced from membership list of Crohn's and Colitis Foundation of America. Pediatric providers excluded. Response rate 34% (n = 363, 220 online, 143 post) 85% male 69% private practice 62% more than 15 years experience 44% IBD patients composed >50% of clinical practice
Main methods and outcome measures	Healthcare provided was required to rank (1 'not important at all' - 5 'very important') the importance of patient competencies thought necessary in successful transition (patient knowledge of condition and treatments, independence, ability to discuss substance use), plus how important they felt medical and developmental issues specific to adolescents to be.
Main findings	55% reported knowledge of medical history important. 69% reported knowledge of medical regime important. 51% reported receiving inadequate medical history from paediatric provider. Adult providers were less concerned about patients

	ability to identify previous and current health care providers (19%) or attend visits themselves (15%). Knowledge of adolescent medical and developmental issues was perceived as important (96% and 89% respectively), yet only 46% felt competent addressing developmental aspects of adolescents. Those with 15+ years experience perceived more competence with developmental aspects of adolescents with IBD than those with <15years experience (51% vs 35%, $p < 0.05$), as did those in private setting as opposed to academic setting (50% vs 34%, $p < 0.01$)
Summary (including strengths and weaknesses)	Suggestions - further training for adult providers in adolescent issues, formal transition checklist, education on medical history and education for patients.

Authors: Sebastian, Shaji and Jenkins, Huw and McCartney, Sarah and Ahmad, Tariq and Arnott, Ian and Croft, Nick and Russell, Richard and Lindsay, James O.
Title: The requirements and barriers to successful transition of adolescents with inflammatory bowel disease: differing perceptions from a survey of adult and paediatric gastroenterologists.
Year: 2012

Does the paper (tick only if yes applies):

▣ Examine transition from paediatric to adult services

▣ Focus on adolescents or young adults diagnosed with IBD
(Crohn's Disease, Ulcerative Colitis or Indeterminate Colitis)

▣ Primary study

Stop here if any of the answers above is No.

Study characteristics Aim/objective of the study Study design Recruitment procedures used	Aim of the study was to identify both the perceived needs of adolescent IBD patients and barriers to successful transition from the perspective of professional involved in care. UK study, postal questionnaire design.
Participant characteristics Sample size Age Gender Diagnosis	132 paediatric gastroenterologists and 729 adult gastroenterologists currently practicing
Main methods and outcome measures	16 item postal survey (mix of open and closed questions) concerning three main areas, current status of provision of transition care; perceived needs for effective transition care in IBD and organisational, clinician and patient related barriers to successful transition. Response rate was 62% and 49% respectively.
Main findings	A structured transition service was perceived very important by 80% paediatric gastroenterologists compared to 47% adult gastroenterologists, moderately important by 34% and 21% of adult and paediatric gastroenterologists respectively and 18% of adult gastroenterologists felt the need for transition of care is minimal and/or not important. Participants from teaching hospitals rated structured transition as very or moderately important than counterparts working in

	general hospital. Both groups raked age as the most important criterion of transition with suggested age being 16 years (56% paediatric and 70% adult) and 18 years old (82% paediatric and 81% adult). However a significant proportion 22% suggested an earlier age of transition at 14 years and 2% felt transition should start at point of diagnosis regardless of age. 43% of paediatric suggested transition during remission compared to 12% adult. 79% of adult services identified inadequacies in preparation of transition compared to 42% in paediatrics. Main areas of perceived deficiency in preparation by adult gastroenterologist were patient lack of knowledge about condition and treatment and co-ordination of care, for paediatric it was problems in self advocacy and co-ordination of care. Lack of resources, clinical time, and critical mass of patients were factors ranked highest by both groups as barriers to transition care. Both adult 65% and paediatric 62% highlighted suboptimal training in adolescent medicine for adult gastroenterologists.
Summary (including strengths and weaknesses)	Highlights the difference in perceptions of adult and paediatric gastroenterologists in the management of transition of care and perceived competencies for adolescents with IBD.

Authors: Wright, Ek and Williams, J and Andrews, Jm and Day, As and Gearry, Rb and Bampton, P and Moore, D and Lemberg, D and Ravikumaran, R and Wilson, J and Lewindon, P and Radford-Smith, G and Rosenbaum, J and Catto-Smith, A and Desmond, Pv and Connell, Wr and Cameron, D and Alex, G and Bell, Sj and De Cruz, P

Title: Perspectives of Paediatric and Adult Gastroenterologists on Transfer and Transition Care of Adolescents with Inflammatory Bowel Disease

Year: 2014

Does the paper (tick only if yes applies):

☑   Examine transition from paediatric to adult services

☑   Focus on adolescents or young adults diagnosed with IBD
         (Crohn's Disease, Ulcerative Colitis or Indeterminate Colitis)

☑   Primary study

Stop here if any of the answers above is No.

Study characteristics Aim/objective of the study Study design Recruitment procedures used	Aim - to explore the perceived needs of adolescents with IBD among paediatric and adult gastroenterologists and to identify barriers to effective transition. Web based survey of paediatric and adult gastroenterologists. Australia and New Zealand.
Participant characteristics Sample size Age Gender Diagnosis	Response rate of 178 clinicians (Australian IBD Association, IBDs New Zealand, The Australian Society of Paediatric Gastroenterology, Hepatology and Nutrition) was 41%, (66% adult, 34% paediatric). All actively involved in clinical practice. 10% of respondents was from New Zealand, remaining from Australia. 56% of paediatric and 31% of adult gastroenterologist undertaking no private sector work. 94% of paediatric and 71% of adult clinicians identified themselves as providers of transition care for IBD.
Main methods and outcome measures	25 item survey on six areas, 1) assessment of current preparedness of adolescent at the time of transfer and adequacy of current transition care, 2) patient factors important in assessing readiness for transition, 3) patient and disease factors important in determining the timing of transfer, 4) organisational, clinician and patient related

	barriers to successful transition, 5) optimal communication methods and models for structured transition.
Main findings	23% felt that adolescents with IBD were adequately prepared for transition to adult care. 49% felt there patients were not adequately prepared for transition. Among both paediatric and adult clinicians factors important for readiness were psychological maturity and readiness as assessed by adult caregiver. Factors of less importance were chronological age and psychosexual maturity.
	Paediatric clinicians rated achievement of educational milestones, psychological maturity, psychosexual maturity and growth and nutrition status as being more relevant is assessing readiness of patients than adult clinicians.
	Self-efficacy and readiness as assessed by adult caregiver were considered the two most important factors to determine timing of transfer by both adult and paediatric clinicians.
	Disease factor was less important than other factors, but when looking closely at disease factor remission and pelvic surgery were most important.
	Adult clinicians prioritised readiness as assessed by caregiver as more important, whereas paediatric clinicians prioritised completion of secondary schooling as more important when considering timing of transfer.
	63% of all clinicians considered the age range 17-19 years as most important.
	Poor medical and surgical handover and patients lack of responsibility for their own care were perceived as major barriers to successful transition by both paediatric and adult gastroenterologists.
	For communication methods joint outpatient clinic was

	favoured by 30% of respondents, transfer meeting by 27% of respondents and multidisciplinary meeting by 23%. Paediatric more than adult clinician identified a transfer meeting with the patient present as the most preferred communication method at time of treatment. A model which varied depending on perceived need of patient and complexity and severity of disease was the favoured model for structured transition (26%).
Summary (including strengths and weaknesses)	Suggestion - Rather than chronological age alone determining transition, personalised assessment of patients psychological maturity, self efficacy and readiness as assessed by their carer are also important factors. standardizing transition care practices with strategies aimed at optimizing communication, patient education, self efficacy and adherence may improve outcomes. Transition programmes in IBD should aim to improve health outcomes such as remission, reduce rates of steroid use, surgery and hospitalisation and improve quality of life. Limitation of study is relatively low response rate of 41%.

Authors: Goodhand, J., Dawson, R., Hefferon, M., Tshuma, N., Swanson, G., Wahed, M., Croft, N. M. and Lindsay, J. O

Title: Inflammatory Bowel Disease in Young People: The Case for Transitional Clinics

Year: 2010

Does the paper (tick only if yes applies):

▣   Examine transition from paediatric to adult services

▣   Focus on adolescents or young adults diagnosed with IBD

       (Crohn's Disease, Ulcerative Colitis or Indeterminate Colitis)

▣   Primary study

Stop here if any of the answers above is No.

Study characteristics Aim/objective of the study Study design Recruitment procedures used	The study investigated the effect of age of onset of IBD and highlighted specific problems present. Retrospective case control design comparing clinical phenotype of IBD in adolescents and adulthood and management strategies using retrospective case notes review and follow up period of 5 years.
Participant characteristics Sample size Age Gender Diagnosis	Patients with established diagnosis of IBD. 100 adolescents in a transition clinic were matched to 100 adults. Disease duration was comparable to both groups, median 4 years (range 3-6 years). Median age of adolescents was 19 years (range 16 - 28 years). Median age of adults 43 years (range 24 - 84). Median age at diagnosis 15 year (range 3 - 26 years) and 39 years (range 13 - 82) respectively.
Main methods and outcome measures	Retrospective case-controlled study, comparing disease extent, radiation exposure, therapeutic strategy and requirement for surgery.
Main findings	Crohn's disease was significantly more common in the adolescents. Disease distribution was ileocolonic in 69% of adolescents and 28% of adults, restricted to the ileum in 20% of adolescents and 47% of adults, and colonic only in 11% and 22%, respectively. Upper gastrointestinal involvement occurred in 23% of adolescents, but was not seen in adults (P < 0.01). Total ulcerative colitis was seen in 67% of adolescents and 44% of adults (P < 0.01). Contrary to previous data

	adolescents did not receive more ionizing radiation than adults. Requirement for immunosuppressive therapy was higher in the adolescent group (53% versus 31%, respectively, P < 0.01). Likewise, 20% of adolescents had required biological therapy compared to only 8% in the adult cohort (P < 0.05).
Summary (including strengths and weaknesses)	Gastroenterologists should recognise that IBD is more complex when presenting in adolescence and the studies data support the creation of specific adolescent transitional clinics.

APPENDIX 2: QUALITY ASSESSMENT

Study1: Bollegala et al. (2003)

A) SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely

2 Somewhat likely

3 Not likely

4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement

2 60 – 79% agreement

3 less than 60% agreement

4 Not applicable

5 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

B) STUDY DESIGN

Indicate the study design

1 Randomized controlled trial

2 Controlled clinical trial

3 Cohort analytic (two group pre + post)

4 Case-control

5 Cohort (one group pre + post (before and after))

6 Interrupted time series

7 Other specify _____

8 Can't tell

Was the study described as randomized? If NO, go to Component C.

No Yes

If Yes, was the method of randomization described?

No Yes

If Yes, was the method appropriate?

No Yes

RATE THIS SECTION STRONG MODERATE WEAK

C) CONFOUNDERS

(Q1) Were there important differences between groups prior to the intervention?

1 Yes

2 No

3 Can't tell

(Q2) If yes, indicate the percentage of relevant confounders that were controlled?

1 80 – 100% (most)

2 60 – 79% (some)

3 Less than 60% (few or none)

4 Can't Tell

RATE THIS SECTION STRONG MODERATE WEAK

D) BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?

1 Yes

2 No

3 Can't tell

(Q2) Were the study participants aware of the research question?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

E) DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes

2 No

3 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

F) WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes

2 No

3 Can't tell

4 Not Applicable

(Q2) Indicate the percentage of participants completing the study.

1 80 -100%

2 60 - 79%

3 less than 60%

4 Can't tell

5 Not Applicable

RATE THIS SECTION STRONG MODERATE WEAK

G) GLOBAL RATING

STRONG (no WEAK ratings)

MODERATE (one WEAK rating)

WEAK (two or more WEAK ratings)

Study 2: Dabadie et al. (2008)

A) SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely

2 Somewhat likely

3 Not likely

4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement

2 60 – 79% agreement

3 less than 60% agreement

4 Not applicable

5 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

B) STUDY DESIGN

Indicate the study design

1 Randomized controlled trial

2 Controlled clinical trial

3 Cohort analytic (two group pre + post)

4 Case-control

5 Cohort (one group pre + post (before and after))

6 Interrupted time series

7 Other specify: Retrospective survey

8 Can't tell

Was the study described as randomized? If NO, go to Component C.

No Yes

If Yes, was the method of randomization described?

No Yes

If Yes, was the method appropriate?

No Yes

RATE THIS SECTION STRONG MODERATE WEAK

C) CONFOUNDERS

(Q1) Were there important differences between groups prior to the intervention?

1 Yes

2 No

3 Can't tell

(Q2) If yes, indicate the percentage of relevant confounders that were controlled?

1 80 – 100% (most)

2 60 – 79% (some)

3 Less than 60% (few or none)

4 Can't Tell

RATE THIS SECTION STRONG MODERATE WEAK

D) BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?

1 Yes

2 No

3 Can't tell

(Q2) Were the study participants aware of the research question?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

E) DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes

2 No

3 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

F) WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes

2 No

3 Can't tell

4 Not Applicable

(Q2) Indicate the percentage of participants completing the study.

1 80 -100%

2 60 - 79%

3 less than 60%

4 Can't tell

5 Not Applicable

RATE THIS SECTION STRONG MODERATE WEAK

G) GLOBAL RATING

STRONG (no WEAK ratings)

MODERATE (one WEAK rating)

WEAK (two or more WEAK ratings)

Study 3: Hait et al. (2008)

A) SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely

2 Somewhat likely

3 Not likely

4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement

2 60 – 79% agreement

3 less than 60% agreement

4 Not applicable

5 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

B) STUDY DESIGN

Indicate the study design

1 Randomized controlled trial

2 Controlled clinical trial

3 Cohort analytic (two group pre + post)

4 Case-control

5 Cohort (one group pre + post (before and after))

6 Interrupted time series

7 Other specify: Retrospective survey

8 Can't tell

Was the study described as randomized? If NO, go to Component C.

No Yes

If Yes, was the method of randomization described?

No Yes

If Yes, was the method appropriate?

No Yes

RATE THIS SECTION STRONG MODERATE WEAK

C) CONFOUNDERS

(Q1) Were there important differences between groups prior to the intervention?

1 Yes

2 No

3 Can't tell

(Q2) If yes, indicate the percentage of relevant confounders that were controlled?

1 80 – 100% (most)

2 60 – 79% (some)

3 Less than 60% (few or none)

4 Can't Tell

RATE THIS SECTION STRONG MODERATE WEAK

D) BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?

1 Yes

2 No

3 Can't tell

(Q2) Were the study participants aware of the research question?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

E) DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes

2 No

3 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

F) WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes

2 No

3 Can't tell

4 Not Applicable

(Q2) Indicate the percentage of participants completing the study.

1 80 -100%

2 60 - 79%

3 less than 60%

4 Can't tell

5 Not Applicable

RATE THIS SECTION STRONG MODERATE WEAK

G) GLOBAL RATING

STRONG (no WEAK ratings)

MODERATE (one WEAK rating)

WEAK (two or more WEAK ratings)

Study 4: Sebastian et al. (2012)

A) SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely

2 Somewhat likely

3 Not likely

4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement

2 60 – 79% agreement

3 less than 60% agreement

4 Not applicable

5 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

B) STUDY DESIGN

Indicate the study design

1 Randomized controlled trial

2 Controlled clinical trial

3 Cohort analytic (two group pre + post)

4 Case-control

5 Cohort (one group pre + post (before and after))

6 Interrupted time series

7 Other specify: Retrospective survey

8 Can't tell

Was the study described as randomized? If NO, go to Component C.

No Yes

If Yes, was the method of randomization described?

No Yes

If Yes, was the method appropriate?

No Yes

RATE THIS SECTION STRONG MODERATE WEAK

C) CONFOUNDERS

(Q1) Were there important differences between groups prior to the intervention?

1 Yes

2 No

3 Can't tell

(Q2) If yes, indicate the percentage of relevant confounders that were controlled?

1 80 – 100% (most)

2 60 – 79% (some)

3 Less than 60% (few or none)

4 Can't Tell

RATE THIS SECTION STRONG MODERATE WEAK

D) BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?

1 Yes

2 No

3 Can't tell

(Q2) Were the study participants aware of the research question?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

E) DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes

2 No

3 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

F) WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes

2 No

3 Can't tell

4 Not Applicable

(Q2) Indicate the percentage of participants completing the study.

1 80 -100%

2 60 - 79%

3 less than 60%

4 Can't tell

5 Not Applicable

RATE THIS SECTION STRONG MODERATE WEAK

G) GLOBAL RATING

STRONG (no WEAK ratings)

MODERATE (one WEAK rating)

WEAK (two or more WEAK ratings)

Study 5: Wright et al. (2014)

A) SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely

2 Somewhat likely

3 Not likely

4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement

2 60 – 79% agreement

3 less than 60% agreement

4 Not applicable

5 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

B) STUDY DESIGN

Indicate the study design

1 Randomized controlled trial

2 Controlled clinical trial

3 Cohort analytic (two group pre + post)

4 Case-control

5 Cohort (one group pre + post (before and after))

6 Interrupted time series

7 Other specify: Retrospective survey

8 Can't tell

Was the study described as randomized? If NO, go to Component C.

No Yes

If Yes, was the method of randomization described?

No Yes

If Yes, was the method appropriate?

No Yes

RATE THIS SECTION STRONG MODERATE WEAK

C) CONFOUNDERS

(Q1) Were there important differences between groups prior to the intervention?

1 Yes

2 No

3 Can't tell

(Q2) If yes, indicate the percentage of relevant confounders that were controlled?

1 80 – 100% (most)

2 60 – 79% (some)

3 Less than 60% (few or none)

4 Can't Tell

RATE THIS SECTION STRONG MODERATE WEAK

D) BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?

1 Yes

2 No

3 Can't tell

(Q2) Were the study participants aware of the research question?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

E) DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes

2 No

3 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

F) WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes

2 No

3 Can't tell

4 Not Applicable

(Q2) Indicate the percentage of participants completing the study.

1 80 -100%

2 60 - 79%

3 less than 60%

4 Can't tell

5 Not Applicable

RATE THIS SECTION STRONG MODERATE WEAK

G) GLOBAL RATING

STRONG (no WEAK ratings)

MODERATE (one WEAK rating)

WEAK (two or more WEAK ratings)

Study 6: Goodhand et al. (2010)

A) SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely

2 Somewhat likely

3 Not likely

4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement

2 60 – 79% agreement

3 less than 60% agreement

4 Not applicable

5 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

B) STUDY DESIGN

Indicate the study design

1 Randomized controlled trial

2 Controlled clinical trial

3 Cohort analytic (two group pre + post)

4 Case-control

5 Cohort (one group pre + post (before and after))

6 Interrupted time series

7 Other specify _____

8 Can't tell

Was the study described as randomized? If NO, go to Component C.

No Yes

If Yes, was the method of randomization described?

No Yes

If Yes, was the method appropriate?

No Yes

RATE THIS SECTION STRONG MODERATE WEAK

C) CONFOUNDERS

(Q1) Were there important differences between groups prior to the intervention?

1 Yes

2 No

3 Can't tell

(Q2) If yes, indicate the percentage of relevant confounders that were controlled?

1 80 – 100% (most)

2 60 – 79% (some)

3 Less than 60% (few or none)

4 Can't Tell

RATE THIS SECTION STRONG MODERATE WEAK

D) BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?

1 Yes

2 No

3 Can't tell

(Q2) Were the study participants aware of the research question?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

E) DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes

2 No

3 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION STRONG MODERATE WEAK

F) WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes

2 No

3 Can't tell

4 Not Applicable

(Q2) Indicate the percentage of participants completing the study.

1 80 -100%

2 60 - 79%

3 less than 60%

4 Can't tell

5 Not Applicable

RATE THIS SECTION STRONG MODERATE WEAK

G) GLOBAL RATING

STRONG (no WEAK ratings)

MODERATE (one WEAK rating)

WEAK (two or more WEAK ratings)

SECTION C

PROFESSIONAL PRACTICE

SECTION C1

GENERIC PROFESSIONAL

SKILLS COMPETENCY

1.0 GENERIC PROFESSIONAL SKILLS
A JOURNEY OF PERSONAL AND PROFESSIONAL DEVELOPMENT
AS A HEALTH PSYCHOLOGIST

CONTENTS

INTRODUCTION

This commentary will describe and reflect upon my professional practice as a trainee health psychologist over a two-year period within my positions as Health Development Advisor - Smoking Cessation for Bromley Healthcare, Professional Support Manager for Target Ovarian Cancer and Senior Public Health and Information Officer for Breakthrough Breast Cancer.

1.1 PROFESSIONAL AUTONOMY & ACCOUNTABILITY

1.1A PRACTISE WITHIN THE LEGAL ETHICAL BOUNDARIES

Throughout my time as a trainee health psychologist I have consistently followed ethical and professional standards in line with the British Psychological Societies standards (Ethics Committee of the British Psychological Society, 2009; Professional Practice Board of the British Psychological Society, 2008) and the Health and Care Professions Council standards (Health and Care Professions Council, 2012).

All of my roles involved directly working with clients sensitive information, which I recorded using appropriate secure systems in accordance with the Data Protection Act 1998. For example, when I started the Professional Doctorate in Health Psychology and was working within smoking cessation, I would input clients details such as personal identifiable information, medication use and progression with their quit attempt onto an online system called Quit Manager. This experience helped me quickly get to grips with another secure system that holds clients information called Raisers Edge, which I used when I later moved on to work within the charity sector, at Target Ovarian Cancer and Breakthrough Breast Cancer. Added to this, in all situations I ensured clients understood how and where their information would be used, including when information may need to be shared without their consent, should there be concern of significant harm to themselves or others. An example of this; in smoking cessation I would inform GPs should their client be using Champix (a prescription only medication used to support a quit attempt) due to the contraindications associated with the products. This meant the patient's medical records could be updated and the GP could monitor any physical affects, as well as taking the appropriate measures to alter a patients current medication, if Champix was likely to interact. During the course of my two years supervised practice, I did not come across any clients that were of serious harm to themselves or others, but I became competent is assessing this risk. This competence developed as I would often go through the risk assessment process with clients wanting to quit smoking, which including assessing a clients feelings and behaviours in relation to their quit attempt, particularly as the process of quitting smoking is linked to depressive symptoms (Hughes and Hatsukami, 1986).

Throughout the two years, I also had the chance to strengthen my management experience. Although I had previous management experience when starting the course, it was outside of the

healthcare sector. Having management experience in the healthcare sector helped me develop my abilities in ensuring my direct reports were also practicing within ethical boundaries. My line management experience was developed early on in Professional Doctorate when I worked as a Health Development Advisor - Smoking Cessation. I supervised two Stop Smoking Advisors ensuring they worked in accordance with the NHS Confidentiality Code of Practice (Department of Health, 2003), for example I would provide guidance on the correct protocol in keeping patient data securely stored. Working within smoking cessation also led to the opportunity of implementing a new system to ensure all surgery data was accurately recorded and systematically collected. It was a big achievement for me to lead on this project as I had not previously been involved in implementing a system for record keeping, this contributed to an improvement in the data quality and the service meeting its national target.

I further demonstrated my competence for practicing within legal ethical boundaries in areas outside of my roles, for example, when I was contracted as a consultant to carry out a qualitative piece of work exploring the health and wellbeing training needs for line managers. Throughout this project I ensured that all audio recordings of the interviews were stored safely and securely, plus when preparing the data for analysis, I ensured participants anonymity was maintained. Moreover, when conducting my quantitative research on the electronic cigarettes, in a school setting using surveys, I collected sensitive data such as age, gender, ethnicity and smoking status, as well as ensuring it was securely stored in a locked cabinet to safeguard the confidentiality of the participants. I also made sure confidentiality was adhered to throughout my practice logs and my overall Health Psychology portfolio where personal identifiable information was removed, unless otherwise agreed.

Throughout my time as a trainee health psychologist there have been occasions where I have had to demonstrate my qualifications and capabilities as a trainee health psychologist. This has been a significant area of learning for me, particularly in non clinical settings, as the understanding of what a health psychologist is and the benefits they can bring are not always clear. This has required me to learn how to concisely demonstrate the range of skills and qualities a health psychologist has and its benefit to a project and/or role. It was an ongoing process of development which I gained primarily through reflection using my professional logs where I would use the process defined by Gibbs model of reflection (Gibbs, 1988). Using this model in practice meant I would use my logs to describe various experiences related to my everyday practice, consider the influencing factors, try to make sense of the situation and what else could have been done, as well as put actions in place to deal with it better if the situation arose again (Gibbs, 1988). This led to my increased confidence in discussing health psychology and its application within different environments, which I felt was limited when I started the course. Towards the end of the course I was delighted when I was invited to deliver a 20 minute talk to undergraduate psychology students on my journey to becoming a health psychologist, which I thoroughly enjoyed as it offered an opportunity to display my breadth of learning and I was able to confidently demonstrate my skills in the various

competencies including teaching and training, consultancy, research and behaviour change interventions and how I have applied them in different environments.

Throughout my two years professional practice I have worked with a range of audiences from young people to older adults and with a range of conditions such as mental illness, cancer and respiratory conditions. I have also worked in areas of public health and prevention including physical activity, smoking behaviour, diet and alcohol. The wide range of areas has strengthened my ability to work as a health psychologist with varied audiences and in all cases practiced in a non-discriminatory manner. On some occasions I have observed and actively worked to minimise the power imbalance between practitioners and clients. An example of this was when working for Target Ovarian Cancer, I was the lead for responding to concerning women enquiries. As a team we would receive a high volume of call from women unsure how to raise health concerns with their GP, particularly if the concern was a known symptom of ovarian cancer. Woman would seek support in how to communicate with their GP and get their GP to take their concern seriously. When dealing with such calls, as well as using appropriate communication skills to make sense of the callers experience, I would provide tips on how to prepare for a GP visit, including booking a double appointment, writing down health concerns prior to visiting to help remain in control and taking supportive health information leaflets which detail a concerned symptom to help minimise the power imbalance that would occur in the therapeutic relationship. The level of concerns related to this led to the development of Top Ten Tips for patients and GPs to help facilitate the conversation about worrying signs and symptoms that could be ovarian cancer and empower patients to raise concerns with their GP. Dealing with concerned women's enquires was challenging at times, as no calls would ever be the same and sometime callers would ring expecting me to know the answers. I developed my skills in dealing with this by making use of my workplace supervision and logs to reflect on how I dealt with each situation and consider if I felt I could of dealt with it better, learning from each enquiry that came through (Gibbs, 1988).

1.1B PRACTISE AS AN AUTONOMOUS PROFESSIONAL

Over the course of the 2 years, I have practiced as an autonomous professional, knowing the limits of my practice and when to seek advice or refer to another professional. An example of this was in my role at Target Ovarian Cancer, as lead on telephone and email enquiries I often needed to refer to other services, if enquires fell out of our remit. This often included concerns relating to medical and/or legal advice regarding diagnosis and/or treatment. Sometimes people would get in contact requesting for specific advice about their diagnosis or treatment, which in such cases I would refer them to talk with their Clinical Nurse Specialist or Oncologist and provide them with tips on how to do this confidently, such as taking time to reflect on what they want to know, the possible outcomes and writing this all down, as well as checking in to make sure they felt comfortable with the information I had given them. On other occasions a caller may have requested advice on filing a legal complaint regarding their diagnosis or treatment where I would refer to NHS patient liaison services as a trusted source or advise them to seek legal help.

I have used a range of systems to monitor my professional performance and reflect on daily professional experiences, including regular individual supervision and group supervisions with other trainees. The group supervision was initiated by London Metropolitan University and I took the lead in arranging sessions and encouraging peers to contribute to the agenda. I also organised social events where we could meet in a more informal and social context. I found these sessions particularly useful as I was able to enrich my learning by engaging with others of a similar status, but also reduce the feeling of loneliness (Thorsen, 2012) I experienced when starting the course, as I was the only person in my cohort. Feedback on these support sessions has been positive from others too and I have handed my responsibilities over to another trainee on the course now I am approaching completion of the Professional Doctorate. Individual supervision sessions with my university supervisor and workplace supervisor have provided space to reflect on my personal and professional development, as well as reviewing my progress of development as a competent health psychologist, such as work challenges and their emotional strain, which has enabled me to build up my professional resilience (Rajan-Rankin, 2013).

My ability to identify when work related challenges are affecting my wellbeing has been strengthened throughout the process through the use of critical reflection. Related to this, the toughest part of the Professional Doctorate I experienced was towards the end when working at Breakthrough Breast Cancer. The organisation was going through constant change and the experience of being a health psychologist in a non clinical setting was increasingly difficult. I felt I was battling between working efficiently as a trainee health psychologist and fitting within the organisations priorities and strategic vision in a high pressured, changing and challenging environment. However, I learnt a lot from this, including the appreciation and understanding of the impact of the transference and counter-transference dynamic in the workplace, where unconscious processes that are hard to locate and understand, influence the organisation dynamics and performance (Diamond and Allcorn, 2003). The importance of self-reflection during these difficult times enabled reflective learning where I have learnt to listen and trust my feelings of concern and share them with the appropriate professionals rather than sitting on feelings of discomfort (Boud, Keogh and Walker, 1985).

Another key skill I developed over the two years was time management, where I often used strategies such as prioritisation using 'to do' lists, maintaining updated project Gantt charts and fully utilising my diary to manage the demands of work, study and personal life. Keeping a clear vision of work and development objectives, including completing the Professional Doctorate in a desired time of two years, coupled with my hard work, determination, enthusiasm and commitment, contributed to me excelling in project tasks, growing as a reflective practitioner and demonstrating my proficiency as a health psychologist.

1.1C DEMONSTRATE THE NEED TO ENGAGE IN CONTINUING PROFESSIONAL DEVELOPMENT

Being a member of the British Psychological Society and within this a member of the Division of Health Psychology, has been a useful way to keep up to date with developments in the profession. Over the two years, I have actively sought opportunities to engage in continuing professionally development, including attending all the London Metropolitan University Health Psychology workshops, which have provided a useful opportunity to discuss with my peers issues concerning legal, ethical and professional practice, but have also provided a learning platform on implementation of health psychology theory in applied settings. I have also attended other events, either through my own arrangement or through my work placements, which have contributed to my development across the competencies, some of these events have included The E-cigarette Summit, Health Psychologist Networking event, and events focused on Behaviour Change Interventions in an applied setting. Moreover, I identified various other resources necessary for my own psychological practice, such as accessing relevant journals and articles, as well as using resources beyond the psychological literature such as National Institute for Care and Excellence (NICE) guidance and Department of Health publications.

Throughout the Professional Doctorate I conducted a systematic review as part of a research group, which led to my first publication (Clarke, Galaal, Bryant and Naik, 2014). This was an opportunity I sought and this accomplishment increased my confidence in conducting a systematic evidence review, which I didn't have when starting the course, as the last time I had conducted a systematic review was six years prior during my MSc Health Psychology. This helped when I was required to conduct a systematic review as part of my health psychology portfolio which was on Inflammatory Bowel Disease and I am currently working with my university supervisor to prepare this systematic review for publication within an international peer reviewed journal. Conducting a review on an area which I knew very little about increased my confidence in venturing into new areas of Health Psychology and my ability to learn about new fields very quickly. I have also sought an opportunity to share some of my findings from my research project which is on the electronic cigarette and am scheduled to deliver a poster presentation at the World Health Conference on Tobacco or Health in Abu Dhabi in March 2015. In addition, I am preparing other aspects of my work to be submitted into peer reviewed journals, which will provide further opportunity to increase my credibility as a health psychologist producing high quality, peer reviewed work.

Other professional development training I embarked on has been beneficial to my professional practice, includes media training. This provided me with skills to respond quickly and think on my feet when dealing with media enquiries for print, radio and TV, plus I have provided evidenced based health comments for blogs and women's magazines, this has further contributed to increasing my credibility as a health psychologist with the general public, as well as strengthening my writing skills for a lay audience. Moreover, the opportunity to shadow health professionals

including a General Practitioner and a gynaecological oncology ward, whilst working at Target Ovarian Cancer was an experience that gave me a deeper understanding of other health professionals challenges and concerns and was useful knowledge when developing behaviour change interventions to assist their work. For example, when I shadowed the GP, it was an eye opener to see the challenges GPs are faced with. With only 10 minute slots for each patient and with many patients waiting until they are about to leave before sharing their most important concern; making it difficult for GPs to use their time effectively. This was helpful when developing the Top Ten Tips to help improve doctor patient communication, particularly with ovarian cancer where symptoms can be very similar to other benign conditions.

I also fully engaged and utilised the appropriate systems for monitoring continuing professional practice at my places of work, in addition to ensuring each placement were fully aware and supportive of my Professional Doctorate training as a Health Psychologist. This was helpful as there was transparency about my learning objectives as a health psychologist and I would ensure I had regular meetings with my line manager to review my practice and work projects. I also took an active role in guiding the nature of those meetings by using an agenda, which was a process I learnt very early on in the Professional Doctorate through a video tutorial on 'managing your research supervisor' and one I used effectively to guide my supervision sessions with my university supervisor, which ensured I made full use of our available time. Other opportunities over the two years where I have actively sought feedback and acted appropriately following feedback received have included teaching and training where I used methods of triangulation (Felder & Brent, 2004) to evaluate my methods, obtaining feedback from a professional, the learners and self feedback using video material. Another example of this is when I developed a feedback form for my client when conducting the consultancy project, to gain an understanding of our working relationship and my ability to work towards to clients aims and objectives. The professional doctorate has increased my confidence in my ability to actively seek and obtain feedback from others and use this to improve my professional practice. Over the past two years I have maintained reflective logs documenting my practice and I have seen a clear development in my level of self reflection and analysis. Reflection helped me make each situation explicit, thinking back as to how I could have done things differently and identifying areas of learning and limitations. This helped me grow and develop where I have been able to integrate knowledge, skills and values, which often led to improved action, as explained in Kolb's model of reflection (Kolb, 1984).

1.2 PROFESSIONAL SKILLS

1.2A COMMUNICATE EFFECTIVELY

Over the two years I have developed into a confident and engaging communicator, with the ability to engage with a varied audience from health professionals to the general public. I have developed the skills to write on a range of levels from detailed reports to information to deliver health messages to the general public. In all my roles it has been necessary to be aware of how non-verbal and verbal communication can be affected by culture, age, ethnicity, gender, religious beliefs, and socio-economic status (Professional Practice Board of the British Psychological Society, 2008). This was particularly important when engaging in face to face contact in a one to one or group setting, which I did at length when working for the Stop Smoking Service. For example, I helped facilitate people through a quit attempt over a period of 12 weeks and the structured time period helped develop my skills in initiating, developing and ending professional relationships with service users. In the initial smoking cessation sessions, it was necessary to provide clients with the range of information to make an informed decision about how they wish to approach their quit attempt, I did this by explaining the various pharmacological products they could use in combination with support gained from their weekly sessions. I took time to demonstrate how each product works and explain the side effects and benefits of each. The more I helped clients through quit attempts the more confident I became in my abilities (Kolb, 1984). Furthermore, over the two years the range of roles I have had, have contributed to me becoming confident in working across multiple departments and with a range of professionals, as well as encouraging the active participation of service users in the development of interventions. For example when working at Target Ovarian Cancer, I developed a primary care advisory board, that included lay representatives as well as primary care health professionals and cancer specialists, which became an instrumental part of the process of developing interventions to be used in primary care settings.

1.2B PROVIDE APPROPRIATE ADVICE AND GUIDANCE ON CONCEPTS AND EVIDENCE DERIVED FROM HEALTH PSYCHOLOGY

It has been very important part of my development as a health psychologist to recognise and where appropriate offer up to date, relevant advice on psychological issues. An example of this includes when I have conducted literature searches to ensure health information is evidence based and updated based on changes in the literature. Furthermore, when working in the Stop Smoking Service, on a regular basis I would summarise, tailor and present complex ideas in an appropriate form in smoking cessation sessions. Another example of this, in stop smoking training sessions I would explain the importance of readiness to quit smoking in a quit attempt using the Stages of Change model (Prochaska and DiClemente, 1984) in a way the audience could understand. I can also confidently evaluate the impact of psychological advice, for example in smoking cessation each session was guided by the client's progression in their quitting process and their challenges,

where advice may have been adjusted dependent on the information brought to that session. Furthermore, in stop smoking training prior knowledge was measured in addition to post knowledge using questionnaires to assess the increase in learning following the delivery of psychological advice.

One of the biggest changes I have seen is the development of my skills and confidence to provide appropriate psychological advice to aid policy decision making, for example when preparing a response to a government consultations or acting as a patient expert and representing women at national consultations. This was something I had not done before embarking on the Professional Doctorate and so when I was first faced with the task of doing this when working with Target Ovarian Cancer, I ensured I actively sought and acted appropriately to advice from my line manager, which I found helped me to increase my ability and confidence. After preparing a couple of responses supervised, it increased my confidence to do it unsupervised and then when I began working with Breakthrough Breast Cancer, although I had to learn their specific approach to dealing with government consultations, the knowledge I gained from Target Ovarian Cancer put me in good stead for leading on government consultations at Breakthrough Breast Cancer.

Where necessary, I obtained permissions for the use of confidential and copyrighted information. For example when I developed a behaviour change intervention to prepare General Practitioners for the Government led campaign on ovarian cancer, I gained the endorsement of the intervention from the Royal College of GPs and Be Clear on Cancer, by going through the appropriate channels to obtain endorsement of their copyrighted logos. Furthermore for my research project I contacted the authors of a previous study to obtain permission to use and adapt the measures they used in their study.

1.2C BUILD ALLIANCES AND ENGAGE IN COLLABORATIVE WORKING EFFECTIVELY

Over the two years I have built and sustained professional relationships collaboratively as a member of a team through the active engagement in team meetings, department meetings, staff away days, and supervision sessions. A more specific example of this on a larger scale is when I worked for Breakthrough Breast Cancer, I was their lead on their physical activity and breast cancer risk project, which involved working closely with a range of departments across the organisation including corporate partnerships, mass participation, community engagement, media and PR to name a few. I developed an internal strategy group to ensure key milestones of the project were reached. I also used a range of methods to communicate the project developments with other people throughout the organisation such as the intranet, blogging and a lunch and learn session. Alongside this, I have worked with external partners to engage new audiences and to assist in cascading the message of breast cancer risk and physical activity to the general public, particularly those from lower socioeconomic backgrounds.

I have further contributed effectively to work undertaken as part of a multi-disciplinary team by highlighting evidence and theory derived from health psychology, for example when working at Breakthrough Breast Cancer, I shared my knowledge on designing, delivering and evaluating behaviour change interventions to strengthen the delivery and evaluation of a pilot project in Scotland. The project's aims were to assess the impact of providing breast awareness information to patients during screening appointments or via screening letters and involved evaluating the data received directly from service users, which was important to gain an understanding of the real life application of this intervention. The pilot also assessed the process of giving the information, by evaluating the views of radiographers to make sense of whether the process worked effectively for them too.

1.2D LEAD GROUPS OR TEAMS EFFECTIVELY

I feel confident in being able to lead groups or teams effectively. Very early on in the Professional Doctorate I managed two Stop Smoking Advisors and would ensure I conducted regular one to one meetings to review their progress and challenges that may have arisen, but also encouraged an open environment where they could speak to me outside of these sessions, should they need to. Working as a line manager I adhered to and implemented sickness and absence procedures in line with company policy and also resignation procedures when a member of staff moved on. I am confident in providing feedback, enjoy supporting others to develop and I am open to receiving feedback on my leadership style. Feedback has taught me that I am an engaging and supportive line manager, providing clear vision and direction, but am also able to empower employees to work with autonomy and encourage innovation. When I moved on to work for Target Ovarian Cancer, I developed my leadership skills as I implemented clinical supervision for the staff that were required to deal with concerned women's enquires, to relieve pressures which were created but the lack of understanding of the emotional strain difficult calls and emails can have on an individual. More recently, when working for Breakthrough Breast Cancer I worked on implementing a large scale intervention on physical activity across the UK, where I was required to motivate and lead a breadth of professionals. All these experiences increased my confidence and competence in allocating work to individuals where I felt they were professionally competent and I was able to facilitate and manage a multi-skilled team. Furthermore, over the period of the Professional Doctorate, I have strengthened my ability to negotiate and influence, which was demonstrated when setting up my consultancy contract and when I negotiated time to study with my employers, as for the majority of the course I was able to negotiate condensed hours. These varied experiences over the two years, has meant I have been able to learn how to identify and utilise leadership styles appropriate to a particular context. I can confidently allocate work to individuals and groups within the specific boundaries of their competence and identify training needs as appropriate. For example when I worked within smoking cessation one of my direct reports was keen to develop their project management skills, I was confident in their abilities so I allocated a work project to strengthen the referral pathway of clients into stop smoking services and was able to oversee this with minimal guidance due to their competence.

FINAL REFLECTIONS

My varied experience of working directly with clients, having responsibility for sensitive confidential information, implementing and evaluating a range of projects, supervising others as well as receiving supervision, has enabled me to acquire competence and confidence in working as an autonomous and accountable health psychologist. Whilst my placements have been very different and I have sought other opportunities for learning and development, I have transferred my learning from one setting to another, demonstrating the value of health psychology in a range of settings. Although challenging at times, particularly when learning new skills like developing a systematic review to publishable standards and responding to government consultations, I have enjoyed this period of growth and development.

At the final stage of putting my portfolio together, I can truly appreciate how much I have accomplished and the challenges I have overcome. I have learnt that I am hard working and conscientious, think creatively and innovatively, but sometimes I can lack confidence and unnecessarily doubt my own skills and capabilities. Although tough at times, the professional doctorate taught me how to maintain a balance between personal and work commitments, as well as identifying my limits in terms of my skills, knowledge and ability and when to seek support and help from others to ensure the best outcomes. My interests in many different areas of health psychology have led to a diverse portfolio and the opportunity to add breadth and depth to my skills and knowledge as a health psychologist. I am a lot more reflective in my practice, which enables me to adapt my work processes based on my learning (Kolb, 1984) and enables me to be a skilled and effective applied health psychologist.

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SECTION C2

BEHAVIOUR CHANGE

INTERVENTION COMPETENCY

MULTIPURPOSE PEN FOR GPS
GOVERNMENT LED OVARIAN CANCER CAMPAIGN

CONTENTS

OVERVIEW

This case study will detail the formulation, delivery, outcome and evaluation of an intervention which aimed to prepare General Practitioners (GPs) for the Government led campaign on ovarian cancer called 'Be Clear on Cancer'. The aim of the 'Be Clear on Cancer' campaign was to improve awareness of the symptoms of ovarian cancer within the general population, urging women to visit their GP should they be concerned they were experiencing any of the symptoms. Following successful local level campaign pilots, a regional pilot took place in the North West of England from 10th February 2014 to 16th March 2014. This intervention, which focuses on preparing GPs for the 'Be Clear on Cancer' regional level pilot campaign sits within the wider government-led ovarian cancer intervention. Preparation was defined as GPs having a comprehensive understanding of the signs and symptoms of ovarian cancer and the diagnostic pathway, achieved through the completion of an online learning module. This case study will provide an in-depth explanation of the development of the intervention, including the theories that underpin it, in addition to providing a reflective account of the process from conception to evaluation. The intervention was conducted between 18th October 2013 and 19th March 2014 during my role as Professional Support Manager with Target Ovarian Cancer, a national ovarian cancer charity based in London.

BASELINE ASSESSMENT OF THE INTERVENTION

The 'Be Clear on Cancer' programme is a Government led initiative, led by Public Health England, in partnership with the Department of Health and NHS England. The programme includes a series of campaigns on specific cancers which aim to raise public awareness of symptoms of cancer and encourage people with symptoms to see their GP earlier. The need for a government driven campaign derived from several factors, with the two main ones being poor survival rates in the UK compared to other comparable countries like Australia, Canada, Denmark, Norway and Sweden (Coleman, Forman, Bryant, Butler, Racher & Maringe et al, 2011) and late diagnosis. 23% of all cancer patients in England present through accident and emergency departments, often with later stage cancers, with a higher figure of 31% in the case of ovarian cancer, where emergency presentations were found to be correlated with lower one-year survival rates (The National Cancer Intelligence Network, 2010). Other factors identified through research that may be contributing to late diagnosis include the non-recognition of the seriousness of a symptom (Macleod, Mitchell, Burgess, Macdonald & Remirez, 2009), not wanting to waste the GP's time, plus the difficulties associated with getting an appointment (Robb, Stubbings, Ramirez, Macleod, Austoker & Walker et al, 2009). Problems with recognition and interpretation of symptoms and the fear of consultation, with respect to embarrassment and to the idea of cancer itself (Smith, Pope and Botha, 2005) are other factors.

The existing research therefore identifies the urgent need to improve earlier diagnosis and survival rates in the UK and the 'Be Clear on Cancer' campaign programme was introduced in January 2011 as a way of doing so. Through the use of social marketing, the 'Be Clear on Cancer' campaign aims to improve symptom awareness and early diagnosis of different cancers amongst the general public. Each 'Be Clear on Cancer' campaign is tested locally, using radio and print advertising and then regionally, with a view to finally rolling them out nationally if they prove effective after thorough evaluation. At regional and national level the campaigns include television advertising.

Target Ovarian Cancer, the national ovarian cancer charity based in London, was delighted with the implementation of the 'Be Clear on Cancer' campaign for ovarian cancer. They had conducted a study in 2012 (Target Ovarian Cancer Pathfinder Study), where the views and opinions of the general public, women whose lives have been affected by ovarian cancer and both primary care and secondary care professionals, were collated to uncover where there was an evident need for improvement. The 2012 study highlighted that just 3% of women in the UK were confident at spotting a symptom of ovarian cancer, a quarter of women waited three months or more before visiting their GP about symptoms and having visited their GP with a concerning symptom, a third of women waited 6 months or more before getting a correct diagnosis (Target Ovarian Cancer Pathfinder Study, 2012).

The NICE CG122 (National Institute for Care and Excellence Clinical Guidance 122, 2011) recommends that a patient displaying any one of the symptoms of ovarian cancer on a persistent and frequent basis should be referred for appropriate tests (which include a CA125 blood test and Trans Vaginal Ultrasound) to further investigate the possibility of ovarian cancer. The symptoms are:

- Persistent abdominal distension (women often refer to this as 'bloating')
- Feeling full (early satiety) and/or loss of appetite
- Pelvic or abdominal pain
- Increased urinary urgency and/or frequency

The 'Be Clear on Cancer' message for ovarian cancer focuses on one symptom in order for the key symptom message not to be diluted by the inclusion of a variety of symptoms. The key symptom message for ovarian cancer in the 'Be Clear on Cancer' campaign is 'Feeling bloated most days for three weeks or more could be a sign of ovarian cancer. Tell your doctor.'

Target Ovarian Cancer recognised the urgent need to support GPs in earlier diagnosis due to the identified long wait times from when women present with a symptom to diagnosis (Target Ovarian Cancer Pathfinder Study, 2012), whilst recognising the challenges with late presentation in the general public, which the overall 'Be Clear on Cancer' campaign focused on. Making the assumption that knowledge changes behaviour and to aid earlier diagnosis of ovarian cancer, (Grimshaw, Thomas, MacLennan, Fraser, Ramsay, Vale et al, 2004; Kühne-Eversmann and Fischer, 2013), Target Ovarian Cancer commissioned the British Medical Journal (BMJ) Learning and the Royal College of General Practitioners (RCGP) Learning, to produced online modules for GPs on the signs and symptoms of ovarian cancer and the diagnostic pathway. These modules are free to access and provide GPs with Continuous Professional Learning (CPD) credits, which can encourage and support change in practice (General Medical Council, 2004). A motivator for GPs to gain CPD credits is the requirement to provide a summary of their CPD activities annually to demonstrate their eligibility for revalidation (General Medical Council, 2004). The module includes a pre and post assessment process to demonstrate to the learner the increased learning from completing the module. To date, 19% (n = 11,190) of the nationally representative sample of GPs (n= 60,013) (General Medical Council, 2014) had completed the modules.

At local level the 'Be Clear on Cancer' ovarian cancer pilots ran in six areas (Thames Valley, Anglia, Essex, North Trent, Yorkshire, and East Yorkshire and Humber), between January and March 2013. Target Ovarian Cancer supported the local pilots by offering their GP educational resources, which were distributed at local awareness raising events. Target Ovarian Cancer found there was an increase in the uptake figures for the online learning modules, where a minimum of 720 completions of the module were undertaken between December and March 2013, above what would have been expected at this time. Area specific data revealed by NHS England on September 6th 2013, stated that confidence in knowledge of symptoms of ovarian cancer increased significantly in the Anglia and Essex pilot areas after the campaign, up from 20% to 31% saying

"very/fairly confident" and 57% of women agreed that "the advertising told me something new", higher than any other 'Be Clear on Cancer' campaign. As a result of the effectiveness of the local campaigns, the decision was then made by Public Health England for ovarian cancer to be run at a regional level in the North West of England from 10th February 2014 to 16th March 2014 (Public Health England, 2013).

With the decision for the campaign to go regional, Target Ovarian Cancer wanted to ensure GPs were prepared for the 'Be Clear on Cancer' regional campaign, particularly with the inclusion of television as a marketing method, in addition to print and radio. Preparation was defined as GPs having a comprehensive understanding of the signs and symptoms of ovarian cancer and the diagnostic pathway, achieved through the completion of an online learning module. By updating their knowledge of ovarian cancer, GPs would be more likely to identify the symptoms and refer women for the correct tests. As the Professional Support Manager for Target Ovarian Cancer, I was tasked with developing an intervention to increase the number of GPs in the campaign area completing the online module so they felt better prepared for the regional campaign.

I initially met with Public Health England and Department of Health to explain that an intervention would be developed to support the overarching 'Be Clear on Cancer' campaign and described the purpose of the intervention, to prepare GPs for the campaign by improved learning through the completion of an online module. Both Public Health England and Department of Health approved that this could take place and were happy to provide endorsement and feedback during the development of the intervention. I proposed the development of a multiuse pen due to the competitive market of eLearning modules and the need to demonstrate value and benefit of completing a module on ovarian cancer as opposed to another health area. The pen would include inside the barrel educational information on the signs and symptoms of ovarian cancer and the diagnostic pathway, as defined in NICE CG122, in addition to advising GPs to update their learning on ovarian cancer by completing an online learning module. The pen has added benefit for GPs, as pharmaceutical companies are no longer allowed to distribute gifts such as pens and note books, so the pen would not be confused with a product from a pharmaceutical company. Also the pen would serve as a multipurpose resource and would be different from the resources already available for download or order on the 'Be Clear on Cancer' website.

As demonstrated in figure 1 (p. 190), the pen would be the start of the behaviour change process and serve as a cue to action (Rosenstock, 1974) of the required behaviour of completing the online learning module on ovarian cancer. Completing the online module would lead to a GP recognising a patient with a symptom of ovarian cancer and referring her for the appropriate diagnostic test. This intervention would sit within the overall 'Be Clear on Cancer' intervention (see figure 2, p. 190 for illustration).
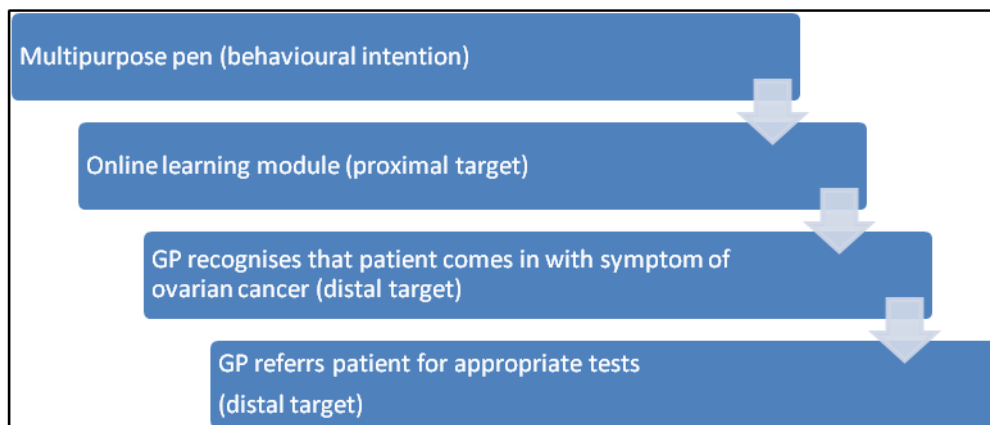
FIGURE 1: BEHAVIOUR CHANGE PROCESS

FIGURE 2: DIAGRAM OF HOW THE INTERVENTIONS FIT TOGETHER

REFLECTION - BASELINE ASSESSMENT OF THE INTERVENTION

This was the first time I had been involved in developing an intervention supporting both a government led campaign and a campaign of regional level. However, I felt my background in Health Psychology and my experience in designing, implementing and evaluating other interventions on a local level provided me with the professional ability and skills to excel in this task. I feel I took appropriate steps to understanding the need for the intervention by scrutinising the relevant literature and discussing with other relevant professionals involved in the development of the campaigns. Reviewing the results for the smaller local pilots also helped me gain a deeper understanding.

FORMULATION OF THE INTERVENTION

The main aim of the intervention was to prepare GPs in the North West of England for the 'Be Clear on Cancer' campaign, by increasing their knowledge, measured through the number of completions of an online module on ovarian cancer.

The aim of the multipurpose pen would be a practical tool, providing educational value by reflecting the 'Be Clear on Cancer' message and highlighting the information from NICE CG122, which details the symptoms of ovarian cancer and advises GPs on the diagnostic pathway. The pen would also direct GPs to an online module on ovarian cancer, which would be a more in-depth way of GPs improving their learning and provide them with CPD credits.

The Theory of Planned Behaviour (Ajzen, 1985) and the Technology Acceptance Model (Davis, 1989), both of which derived from the Theory of Reasoned Action (Ajzen and Fishbein, 1980), a model for the prediction of behavioural intention, covering predictions of attitude and predictions of behaviour were used to inform the intervention. As demonstrated in figure 3 (p.191), the Theory of Planned Behaviour states that behavioural intention is determined by attitude, subjective norms and perceived behavioural control.

FIGURE 3: THEORY OF PLANNED BEHAVIOUR

In the context of this intervention, the behaviour, in which a GP completes the online module, is predicted by behavioural intention, indicated by whether the GP intends to complete the online module on ovarian cancer. This is determined by the GP's attitude of whether he or she is in favour of performing the behaviour and subjective norm, the impact of social pressure influencing the GP to engage in the behaviour, in this case the 'Be Clear on Cancer' campaign. Perceived behavioural control including whether the GP is confident in performing the behaviour, could be influenced by their professional responsibility to perform the behaviour or whether the GP has pre-existing knowledge about the behaviour, for example has already completed a module on ovarian cancer. Perceived behavioural control could also be influenced by whether the GP remembers to perform the behaviour and the environmental context of whether the GP feels completing this module is

more important given the environmental context, than completing another online learning module. The development of a multipurpose pen will aim to impact on the subjective norm, increasing a GPs perceived behavioural control and improve their attitude, providing them with the information to access the online learning module. The pen would aim to increase implementation intention (Gollwitzer, 1999), acting as a cue to action and jog their memory to complete the online module.

The Technology Acceptance Model (as detailed in figure 4, p. 192), states that behaviour and behaviour intention is determined by attitude and perceived usefulness of the technology, the latter of which influences attitude directly. Moreover, perceived ease of use directly affects both attitudes and perceived usefulness. In the context of this intervention, the target behaviour, 'a GP completes the online module' is again predicted by behavioural intention of whether the GP intends to complete the online module on ovarian cancer. In contrast to the Theory of Planned Behaviour this is determined by perception of usefulness of the online module, however similar to the Theory of Planned Behaviour, the GPs attitude towards using the online module plays an important factor in behavioural intention. In the Technology Acceptance Model perceived usefulness and ease of use of the online module can also impact on the GP's attitude. In addition, ease of use can influence the perception that the online module will be useful and increase understanding. External factors in this case, the multipurpose pen, can influence the perceived usefulness and ease of use of a technology by directing GP's to the eLearning module.
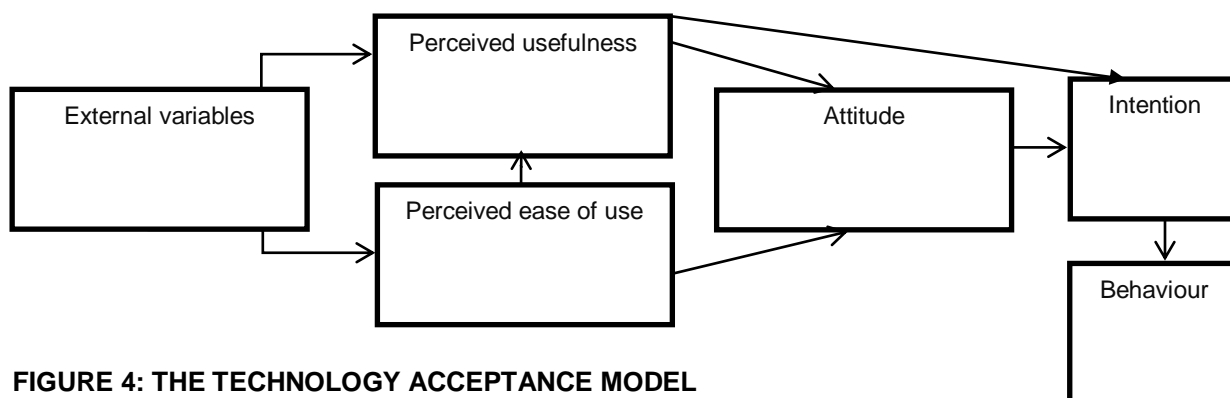

FIGURE 4: THE TECHNOLOGY ACCEPTANCE MODEL

Both theories explain behaviour in terms of factors that are amenable to change. The theory of planned behaviour had a wider scope and is more suitable in terms of this intervention as it considered wider implications that could affect attitude, such as perceived behavioural control and subjective norm, which would impact the campaign as a whole and could increase the uptake of the online module, however, it lacks the inclusion of ease of use and usefulness which the Technology Acceptance Model identifies. The Technology Acceptance Model does lack the potential for external factors to directly impact on the GPs attitude. Figure 5 (p. 193) demonstrates how this intervention will use constructs from both the Theory of Planned Behaviour and the Technology Acceptance Model.
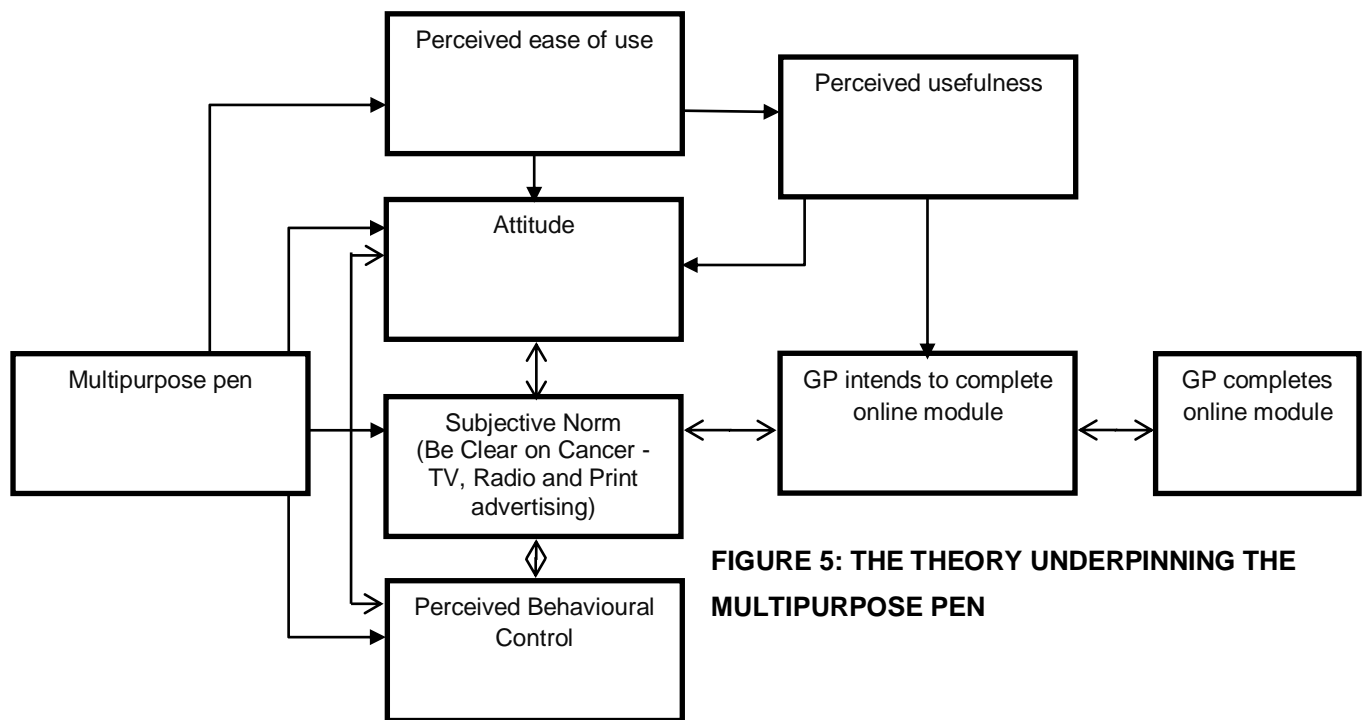
FIGURE 5: THE THEORY UNDERPINNING THE MULTIPURPOSE PEN

In order to effectively evaluate the impact of the multipurpose pen on a GP completing the eLearning module, it was essential for the regional campaign to track the number of module completions for the North West of England where the campaign was running and the pen was distributed. Figures could be compared with areas where the campaign was not running.

For the regional campaign the RCGP Learning module was chosen as the key symptom message for the campaign was bloating and their learning module specifically focused on bloating. Called 'Bloating and Other Abdominal Symptoms: Could it be Ovarian Cancer?', this module gave GPs the opportunity to think in greater detail about presenting symptoms and consider which factors might distinguish ovarian cancer from common conditions that could be associated with the symptom of bloating including irritable bowel syndrome, urinary tract infection and ovarian cysts. It was arranged that I would receive module completion figures for each area across the UK to compare figures for the North West of England with the rest of the UK.

The pen took 10 weeks to design and produce. To start with, the wording for the pen was developed, ensuring it was consistent with the 'Be Clear on Cancer' messaging and the clinical guidelines on ovarian cancer (NICE CG122). It included the symptoms and diagnostic pathway for ovarian cancer and it directed GPs to complete the RCGP online module via the Target Ovarian Cancer website. The Target Ovarian Cancer webpage was updated which enabled GPs to easily access the RCGP online module. The wording was circulated internally to the Director of Public Affairs and Services and the Director of Communication and externally to the Department of Health, Public Health England and the RCGP for review. Once final wording was approved by all parties, the 'Be Clear on Cancer' logo and the RCGP logo was added to the art work.

The multipurpose pen was designed to be the colour teal on the outside, reflecting the 'Be Clear on Cancer' ovarian cancer campaign colour, with the colour purple used inside to represent the Target

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Ovarian Cancer corporate colour. An external designer was sourced to develop the art work and produce the final products. The final artwork was again reviewed by all stakeholders and approval was sought. I requested a production of 4000 flag pens, in order to distribute 3 pens per 1215 practices in the North West and also to have surplus to distribute to GPs at events and conferences in the region throughout the campaign. The final artwork (as illustrated in figure 6, p. 194) was received on 18th December 2013 and the product was received on 16th January 2014.

FIGURE 6: EDUCATIONAL PEN FOR GPS TO PREPARE THEM FOR THE 'BE CLEAR ON CANCER' CAMPAIGN

REFLECTION - FORMULATION OF THE INTERVENTION

The formulation of the intervention was a smooth process and I communicated effectively and professionally with both internal and external partners involved. I had a clear understanding of the theories underpinning the intervention and kept this in mind when developing the pen. The process from initial draft to final product was executed efficiently and I was pleased with my performance and the ability to proof content and gain approval from others involved.

DELIVERY OF THE INTERVENTION

The multipurpose pens were distributed on 14th February 2014 to all GP surgeries in the North West of England (n = 1215), together with a supporting letter (appendix 1, p. 203).

A GP action week took place during the campaign, 3rd – 9th March 2014 that was advertised, for those that live in the North West of England, via email and on the Target Ovarian Cancer website and social networking sites Twitter and Facebook. The GP action week encouraged individuals to place a 'supporting Be Clear on Cancer' sticker (see figure 7, p. 195) on existing Target Ovarian Cancer GP resources and bring to their GP surgery to reinforce the need for GPs to complete the online learning module. This was implemented as a reinforcement strategy to contribute to the multifaceted intervention, as patient mediated interventions can reinforce clinician behaviour (Robertson & Jochelson, 2006). As illustrated in figure 8 (p. 195), the GP action week, the delivery of the pen and the 'Be Clear on Cancer' campaign were all factors that could influence a GPs perceived behavioural control and attitude, leading to an increased likelihood of engaging in the behaviour. Figure 8 (p. 195) explains the methods of distribution used for each separate intervention.
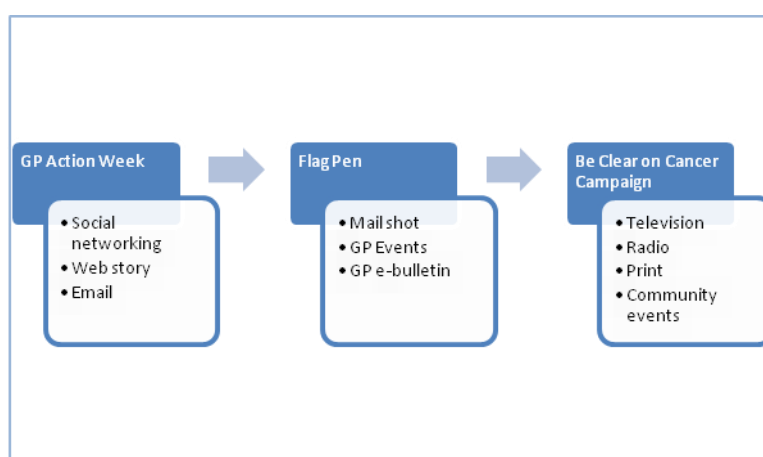

FIGURE 7: STICKER FOR GP ACTION DAY

FIGURE 8: THE METHODS OF DISTRIBUTION USED FOR EACH SEPARATE INTERVENTION

The total cost of the design, delivery and evaluation of the intervention was £6078.83 (see figure 9, p. 196 for breakdown). This worked out to £1.52 per pen and £4.46 per surgery.

Intervention costs:	Amounts:
Design of flag pen	£240
Production of flag pen	£2840
Distribution list of GP surgeries in the North West of England	£627
Temp to distribute materials (3 days)	£334.74
Envelops	£32.39
Postage	£704.70
Sticker (Design and production)	£230
RCGP online module tracking	£1070
Total:	**£6078.83**

FIGURE 9: BREAKDOWN OF COSTS FOR THE DESIGN, DELIVERY AND EVALUATION OF THE INTERVENTION

REFLECTION – DELIVERY OF THE INTERVENTION

An area of concern was ensuring the multipurpose pen reached the GPs within each surgery in the North West of England, as failure to do so could impact on the intervention. I had already anticipated that a potential flaw could be the letter being opened by a practice manager and the pens not reaching the target audience, the GPs. It was essential to reflect on potential flaws that could occur to make necessary arrangements to overcome them and sending the letter with the multipurpose pen (appendix 1, p. 203) was a way of doing this. The GP action week was also a potential way of overcoming this barrier and was implemented as another method to encourage the behaviour of completing the online learning module. I was pleased with my ability to reflect on challenges that may arise and develop strategies for potentially overcoming these, as it is essential to ensuring the intervention is delivered as effectively as possible.
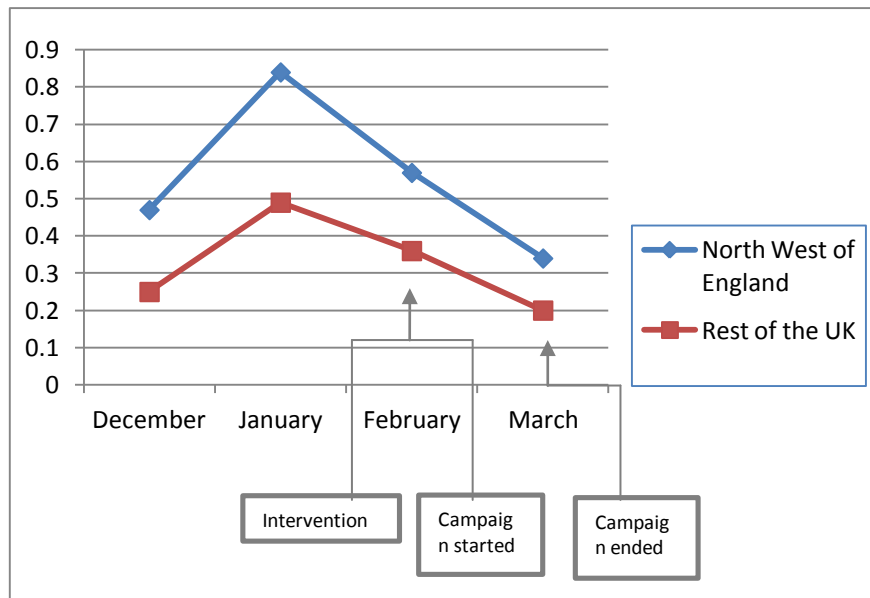
EVALUATION OF THE INTERVENTION

The campaign ran from February 10th to March 16th and the number of completions of the RCGP online module (as detailed in table 1, p. 197) was recorded on, before and during the campaign for the North West of England and the rest of the UK.

	North West of England (n = 4905)		Rest of UK (n = 64432)	
	Completions	% of users	Completions	% of users
December	23	0.47	165	0.25
January	41	0.84	321	0.49
February	28	0.57	233	0.36
≤March 18th	17	0.34	129	0.2
Total:	109	2.22	848	1.32

TABLE 1: NUMBER OF COMPLETIONS OF THE RCGP OVARIAN CANCER ONLINE MODULE IN THE NORTH WEST OF ENGLAND

As seen in graph 1 (p. 198), there was an increase in the number of completions of the RCGP ovarian cancer module during the campaign month (February) compared to December, before the campaign started. However, it was interesting to see the largest number of completions took place in January, immediately before the campaign took place, which could be associated with learning after the festive holiday, rather than the campaign itself, as this trend was the same in the campaign area (the North West of England) and the rest of the UK. Uptake in the North West of England was double uptake in the rest of England both before and during the campaign, which suggests that the 'Be Clear on Cancer' campaign influenced the uptake of GP modules in this region when compared with the rest of the UK. It is doubtful that the multipurpose pen made a significant impact on the number of GPs completing the module, as when it was distributed in February, eLearning completion figures for this module were declining. It is however apparent from graph 1 (p. 198) that figures were clearly higher in the campaign area than the non-campaign area.

GRAPH 1: % OF RCGP USERS UNDERTAKING THE OVARIAN CANCER ELEARNING MODULE

Graph 1 (p. 198) demonstrates that GPs are clearly using the eLearning module in the campaign area more than non-campaign areas, highlighting eLearning as a method GPs use to improve learning, particularly when they are aware of a forthcoming government led campaign. From the statistics it is unlikely this particular intervention increased GP learning as the biggest increase took place prior to the pen being delivered to surgeries.

REFLECTION – EVALUATION OF THE INTERVENTION

Tracking the number of completions in the North West of England and being able to compare the figures with the rest of the UK was vital, this is because during local pilots it was inferred that there was an increase in learning. It was difficult to state if this was a result of the campaign and also whether Target Ovarian Cancer resources were contributing to this increase. On reflection, it is difficult to ascertain what factors caused the increase in eLearning in the campaign area. Also it is impossible to measure behaviour intention in this particular intervention which is something that needs to be considered in future work.

OUTCOME OF THE INTERVENTION

The results of the intervention imply that the multipurpose pen did not lead to an increase in learning in campaign areas versus non campaign areas as the pattern of completion rates were the same for both groups, with the greatest increase in January prior to the intervention being implemented (see graph 1, p. 198, which indicated when the multipurpose pen intervention was delivered). As GPs in both campaign and non-campaign areas were increasing their learning in January, this information could be particularly useful in identifying when GPs prefer to complete eLearning courses, as it could be useful when preparing to launch campaigns and supportive events. Reasons could include GPs wanting to complete more eLearning following the festive season, or the confounding factor that March is ovarian cancer awareness month may also have contributed to this rise in both campaign and non-campaign areas, however research would be needed regarding these assumptions before making any conclusions.

Despite this, completion rates in the campaign areas are significantly higher than non-campaign areas, which indicates that a government led campaign does influence GPs to increase their learning through the use of an eLearning tool, as online learning has been found to mediate the learning experience for health professionals (Carroll, Booth, Papaioannou, Sutton & Wong, 2009; Delf, 2013; Wutoh, Boren & Balas, 2004). Learning via the completion of an online module could have been considerably higher in the campaign area than what is depicted in this intervention, as GPs could have completed a different ovarian cancer eLearning module such as the BMJ ovarian cancer online module, which was not being tracked in this intervention. Also due to methodological constraints of the online module, behaviour intention was unable to be measured. It would have been beneficial if the module recorded the number of people that started the module and did not complete it. Also, on reflection, a separate URL could have been created for the intervention to measure the number of people that clicked through to the sight, as a way of measuring behaviour intention.

Further research would be needed to investigate the multipurpose pen, as it may have been effective for other purposes not evaluated in this intervention, such as constructs identified in the theories underpinning the intervention, like impacting on attitudes towards the campaign, or increased awareness of the signs and symptoms of ovarian cancer, or Target Ovarian Cancer GP resources.

It is clear to see that from the results of the monthly figures alone, it is hard to come to a firm conclusion on the success of the multipurpose pen as an intervention, but it is important to recognise it may serve some purpose. Further in-depth qualitative research would assess the attitudes of GPs regarding the multipurpose pen and what purpose it served for them. Further research could consider a randomised control trail to ascertain the effectiveness of the multipurpose pen as a tool to increase learning, although qualitative in-depth analysis would be of more use to assess the exact attraction of a multipurpose pen to a GP. The results of this

evaluation were fed back during an update meeting on 19th March 2014 to the Department of Health and Public Health England and other stakeholders. It was encouraging to see that those involved in the meeting were now using eLearning completions as a measurement when considering the success of a campaign, should ovarian cancer reach a national campaign level.

From the results of this intervention alone and given the costs of this intervention, I would not recommend the pen as a resource should the ovarian cancer campaign reach national level, until further research is done on the pen to clearly identify its role in preparing GPs for a government led campaign. Reaching out to over 60,000 GPs nationally through the use of a multipurpose pen would cost around £90,000, based on the cost of this intervention this would not be cost effective given the ambiguity of the results of this intervention. Further research, however, may identify the pen as a suitable resource for smaller scale intervention projects.

REFLECTION – OUTCOME OF THE INTERVENTION

This was a very interesting intervention and working with a range of stakeholders to develop it contributed to my professional growth as a Health Psychologist. On reflection, if time allowed and in an ideal situation, a small pilot on the effectiveness and usefulness of the multipurpose pen would have been useful before implementing an intervention of such cost at this level. I do however feel that this intervention has identified the importance of GP learning in a campaign area and it should certainly be considered as an indicator when evaluating a campaign at such high level.

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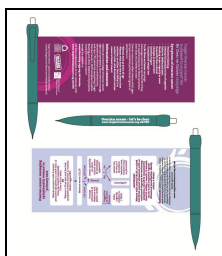
Useful tools to support GPs with 'Be Clear on Cancer'

Dear   ,

Target Ovarian Cancer is delighted to share with your practice useful tools to support GPs during the **'**Be Clear on Cancer' Campaign, taking place in your area from February 10th 2014 – March 9th 2014. A government initiative, the 'Be Clear on Cancer' campaign aims to raise public awareness of symptoms of ovarian cancer and aid earlier diagnosis. **Women experiencing bloating, most days, for three weeks or more are being encouraged to visit their GP** as this could be a sign of ovarian cancer (as detailed in NICE Clinical Guidelines 122).

In addition to briefing your colleagues on the campaign, it is imperative these helpful resources are circulated to GPs in your practice:

- The free-to-access RCGP Online Learning module **'Bloating and Other Abdominal Symptoms: Could it be Ovarian Cancer' www.elearning.rcgp.org.uk/ovarian**

- **The Flag Pen** (see picture below) as a helpful reminder of the signs and symptoms of ovarian cancer and the diagnostic pathway (as defined by NICE CG122).

Please pull metal strip of the pen for the information to unfurl.

We also have other resources we can provide to support your practice, including symptoms **leaflets and posters** (x1 poster enclosed)**;** CA125 and ultrasound **fact sheets** developed for GPs to give to patients who they are referring for tests; and **Ten Top Tips** (developed with Macmillan) to support patients and GPs in communicating more effectively with each other about the symptoms of ovarian cancer. Please be in touch with mfeakes@targetovarian.org.uk if you would like additional resources delivered free of change, including similar flag pens to those enclosed.

I do hope the GPs within your practice take the opportunity to complete the RCGP online module and find our flag pens useful for the campaign.

Kind regards
Tilean Clarke, Professional Support Manager

SECTION C3

CONSULTANCY COMPETENCY

CONSULTANCY

██████████████████████████████

CONTENTS

INTRODUCTION

This case study will describe and reflect upon my experience of being brought in as an external consultant by the ███████████████████████████ It will explore how the consultancy was set up, delivered, monitored and reviewed, taking into account relevant theoretical frameworks.

4.1 ASSESSMENT OF REQUESTS FOR CONSULTANCY

██████ Health and Wellbeing team consists of two full time members of staff, the Project Manager for Workforce, Health & Wellbeing, and a Health and Wellbeing Specialist, who is also a chartered clinical psychologist. ██████ Health and Wellbeing Roadmap is their vision for better employee health and wellbeing within the railway industry. Their current team is not large enough to deliver the number of health and wellbeing projects they wanted to achieve. They were seeking a consultant with the right level of expertise to help them meet their project demands. I contacted ██████ expressing my interest in being involved as a trainee Health Psychologist to assist with their project demands.

With a view to accepting me on board as a consultant, ██████ Project Manager for Workforce, Health & Wellbeing contacted me on the 4th August 2014. I was asked to provide an overview of how I would provide consultancy to scope out how ██████ should engage with the railway workforce in regards to health and wellbeing projects and/or to develop a managing director's 'pack' to engage them on improving health and wellbeing within their organisation, including the initial associated costs. I developed a proposal which outlined how I would conduct the project, timelines and associated costs (see appendix 1, p. 215-220), which I emailed on the 7th August 2014 for their consideration.

The initial reaction of my project proposal was positive, however, on the 11th September 2014 it went up the ranks for final sign off by the board, the proposal was rejected, with a decision that the project could be conducted in-house. The board felt that it could potentially be more difficult for a consultant to conduct exploratory research with the managing directors and internal colleagues, who had built rapport with these senior level executives over a number of years, would be best placed to carry out this project. The board did express that they were happy for me to work with the health and wellbeing team on an alternative project. This was to explore the health and wellbeing training needs for line managers and it was suggested I meet with the Health and Wellbeing Specialist, who would be the contact for the project, to develop the project plans. A meeting was arranged for the 13th October 2014 with the project contact to identify, prioritise and agree expectations, needs and requirements of the client. At the start of the meeting I received confirmation to audio record the session, so I could fully engage in the meeting rather than taking my focus away from the discussion by making lots of notes. This also meant I could gain a clear understanding of the clients expectations. At the meeting we discussed the best approach to

explore the health and wellbeing training needs of the line managers. We agreed that to gain an understanding of their personal view of what health and wellbeing meant to them, semi-structured interviews would be carried out and the information analysed using Interpretative Phenomenological Analysis (IPA). IPA is a methodological tool commonly used by psychologists to focus on understanding individuals' experiences (Smith, 1996). IPA was chosen to explore the individual's personal experience of health and wellbeing. IPA gave the advantage of investigating the phenomena by learning from those experiencing it, a person centred approach meant the individual's voice was central to the development of theory. Moreover, IPA produces results that reflect the subjective unshared aspects of an experience (Smith,1996).

Together we decided that the project would be completed in four phases, one of which would be a pilot phase. This would involve the development and testing of the materials needed to carry out the project using a small pilot sample. Phase 1 would involve collecting the data by conducting further interviews, phase 2 would involve analysing the transcripts and writing a report which explains the findings, and the final phase would involve the development and evaluation of a suitable intervention based on the findings from the report. The current case study focuses on the pilot phase of the project.

During the meeting the feasibility of the proposed consultancy was discussed at length. On the project proposal I had estimated a completion date of the 9th January 2015 for all four phases of the project and an investment of £6000, which both the client and I knew was ambitious. We identified this as an initial risk due to the scale of the project. The proposed methodology meant there was potential for the project to take a lot longer than proposed, due to the delay and/or effort it may take in obtaining the right participants for the project, as well as the length of time transcribing qualitative materials could take, not to mention the time it would take to develop an intervention based on the findings. The date of the 9th January 2015 was openly explained to the client as the date I would need to step out of the project due to other commitments. Despite this risk the client was happy to proceed, with the understanding the it is unlikely the project would be completed by the 9th January 2015 but they felt, if necessary, the project could be continued and completed internally by the project contact, who is a clinical psychologist by background and has extensive experience in IPA. The main purpose of the client obtaining a consultant was to provide extra resource, as the Health and Wellbeing team was too small to meet their desired objectives. The team were delighted to have me on board, despite the potential in me not being able to be a part of the entire project. The client agreed that I would be paid as quoted on my proposal at an hourly rate of £50 per hour (see appendix 1, p. 215-220). It was also agreed that my fees would cover the time I dedicated to the project and would not cover other costs such as travel expenses, meetings/venue spaces and subsistence. Those additional fees were agreed as additional costs incurred by the client.

The client and I also explored other possible risks that the project could encounter these included little or no response from line managers willing to take part in the project, due to the sensitive

nature of the project and it not being deemed to be a priority for them. As the consultant I planned to avoid this risk, I ensured the information created to advertise for potential participants would target the needs of the individual as well as fully explaining what the individual would gain from participating. They were advised that the information collected for the project would be confidential and stored safely and securely. ████ also felt the risk was minimal as they were well respected in the industry, which would help people trust the research and the confidential nature of the project. Following this meeting the project proposal was amended to reflect the update project details (see appendix 2, p. 221-227).

It was agreed with the client that the consultancy would commence on the 20th October 2014. ████ were due to hold a Health and Wellbeing Conference for the industry on this day, which served as a great introduction into the field. My knowledge of the industry continued to grow throughout the consultancy by reading literature in the field. In addition, meetings with clients and the pilot data collection were all sources that helped increase my industry knowledge.

I am pleased with my ability to confirm the agreement and the negotiation skills I developed in the process. I quickly formed a strong working relationship with the client, which helped me control my anxieties related to working in a new field. The client's flexibility with the timelines and understanding of the time I could invest with them as a consultant helped me feel less anxious. A key learning point is that I need to put more consideration into developing realistic timelines for large scale projects when preparing a proposal document, perhaps working with the client to ensure the timeframes are realistic in relation to their demands and expectations.

I found costing the work a daunting process, as I had no experience of doing this and did not want to appear to be undervaluing my abilities or over charging for the work. However, following discussions with other consultant Health Psychologist to gain an understanding of their price structures, which ranged between £45 per hour for a trainee health psychologist, to £75 per hour for a fully qualified health psychologist, I felt my rate of £50 per hour was appropriate.

4.2 CONSULTANCY PLAN

The implementation plans were documented in the proposal (see appendix 2, p.221-227). For the pilot phase of the consultancy this included the development of materials to conduct the semi structured interviews in order to explore line managers' health and wellbeing training needs. The interviews would be carried out with line managers and also health specialists in the industry and so two separate sets of materials needed to be designed and tested on a small number of people. The interviews would be transcribed to gain an appreciation of the process and one interview would be analysed to demonstrate the level of detail IPA required. The findings, including recommendations, would be reported to the client.

The client's responsibility and the consultant's responsibility throughout the project were outlined in the project proposal (see appendix 2, p. 221-227). The client's responsibility was to assist me in finding the relevant people to schedule interviews with, as well as recommending suitable literature to aid the development of the project. As the consultant, my responsibility was to work towards achieving the desired aims and objectives, using the proposed methodology. Detailing the responsibilities in the project proposal helped clarify the roles of the individuals and lines of accountability.

The framework underpinning the consultancy was the process consultation model (Schein, 1999), where the ultimate goal was to develop a helping relationship. Both the client and I worked together in planning the project in order to share the problem, it helped reveal the client wants and what would be helpful (Schein, 1999). When developing the helping relationship it became apparent that although the client had the necessary expertise within the team to deliver the health and wellbeing training project themselves, they did not have the available time to do so, and so they sought my assistance as a consultant. As the consultant I had moved into the Selling and Telling model of consultancy (Schein, 1999), in order to fulfil their need of understanding the health and wellbeing training needs of line managers. Once I began conducting the semi-structured interviews I moved into the Doctor-Patient Model (Schein, 1999) where I was able to diagnose the problem in attempt to provide the solution. Moving from one model to another throughout the consultancy process was acceptable depending on the situation within a consultancy (Schein, 1999).

Working together with the client to plan the consultancy helped increase my confidence that the project was developed to meet the client's requirements. This also helped me develop an understanding of the industry and organisations culture, which was particularly useful as I had little experience in this area. I very quickly developed a good working relationship with the client, which helped me relax, adapt to the role of consultant and lead the project through the regular meetings and correspondence we had.

4.3 ESTABLISH, DEVELOP AND MAINTAIN WORKING RELATIONSHIPS WITH CLIENTS

The consultancy for the most part was conducted at home, except when carrying out the pilot interviews at an external railway organisation. The client and I discussed the process which would suit us best in terms of developing, maintaining and monitoring our working relationship. We agreed it would be best to meet at regular intervals and the purpose of the meetings were to provide an update on how the project was developing, brainstorm ideas for any difficulties that had arisen and conduct a review of progress and monitor our working relationship. Throughout the pilot phase we had two face to face meetings and a telephone meeting. These helped build rapport and ensured the project was meeting both of our expectations.

The relationship I had with the client was positive and there was frequent communication, which helped us be transparent with each other about how the project was developing. The pilot stage of the consultancy took 45 hours to complete and drew to an end on the 30th November 2014. This was 20 hours more than initially estimated and two weeks later than originally expected, but the regular meetings with the client meant that I could be clear on why the project was running at this speed and taking longer than I had anticipated.

4.4 CONDUCT CONSULTANCY

During the period of 20th October 2015 to 30th November 2014, I implemented the following activities in line with the requirements of the pilot stage of the consultancy.
1) I conducted research to establish a base context, including reviewing relevant literature and attending the ▮▮▮▮ Health and Wellbeing Conference .
2) I developed the materials needed to conduct semi-structured interviews with line managers and health specialists, including:
Recruitment templates (x1 for line managers, x1 for health specialist, see appendix 3, p. 228-229)
Interview Performa (x1 for line managers, x1 for health specialist, see appendix 4, p. 230-236)
Consent form (see appendix 5, p. 237)
Information sheet (see appendix 6, p. 238-239)
3) I carried out three pilot interviews to test the materials
4) I transcribed all the pilot interviews (see appendix 7, p. 240-255).
5) I analysed one interview (see appendix 8, p. 256-270)
6) I produced a report on the outcomes of the pilot, detailing recommendations (see appendix 9, p. 271-272)

When working from home I adopted the Pomodoro technique (Cirillo, 2007), which is a time management technique, in which you work in 25 minute chunks separated by short breaks. This helped me keep an accurate record of how long I was dedicating to the project.

The closing of the pilot phase was marked by sharing the materials (appendix 3 - 6, p. 228-239), transcripts (appendix 7, p. 240-255), analysis of one transcription (appendix 8, p. 256-270) and a short report on the pilot phase with the client (see appendix 9, p. 271-272). As a result of the pilot, the following recommendations (as detailed in appendix 9, p. 271-272) were made:

- Transcribing of the interviews takes one hour for 10 minutes of recording. Although there is a benefit to the researcher transcribing the materials to strengthen familiarity with the content, it will take up a large part of the budget should the consultant continue to transcribe future interviews. It is therefore recommended that transcribing be completed by an administrator to save time and costs. The transcribed materials can then be handed back to the consultant in order to conduct the analysis.
- For pilot 1 of the project, it is recommended that there is a second coder involved to minimise the risk of bias. Due to ▮▮▮▮▮▮▮▮▮ experience with IPA analysis, it is recommended

that if time commits, ████████ should become this 2nd code. If time does not permit, the services of a 2nd psychologist should be elicited to strengthen the analysis process and I am happy to recommend skilled psychologists to assist.

- Interviews conducted in phase one of the project should be done with different management levels, inclusive of a health specialist, to gain an appreciation of the varied responses, in order for the intervention that is later developed to appeal to all managers.

I really enjoyed conducting the pilot phase of the project as a consultant and the client was a pleasure to work with their enthusiasm for the project was a great help. Although a large part of the work was conducted from home, I felt I put appropriate systems in place to ensure I kept track of the time I dedicated to the project. I feel I implemented the pilot phase to a high quality and was transparent with the client on the delivery and outcomes of the project throughout.

4.5 MONITOR THE PROCESS OF CONSULTANCY

The pilot phase of the project was monitored throughout via email and meetings with the client. At each meeting I provided feedback and information on how the consultancy was progressing, it also gave an opportunity for the client to provide further input into the project. This helped ensure there was a high level of transparency between me and the client throughout. Materials when developed were signed off by the client before being used in the pilot interviews as a quality and control mechanism, where changes that were identified were implemented accordingly. All consent forms and transcripts were shared with ████s Health and Wellbeing team at the end of the pilot phase, within all transcripts identifying information was removed for participant anonymity purposes. The monitoring process throughout the consultancy worked well for both myself and the client. It provided opportunity for the client to assess quality and also ensure that the project was being delivered to their expectations.

4.6 EVALUATE THE IMPACT OF THE CONSULTANCY

A formal evaluation of the pilot phase was conducted using a feedback form (see appendix 10, p. 273) which I developed and sent to the client to ascertain how they rated our working relationship to date, including the quality of my work. The clients feedback was extremely positive and they rated the quality of preparing the proposal as excellent, stating I had prepared a comprehensive proposal which was flexible to their needs. The client rated the quality of me as a consultant as excellent, detailing that they found me warm, approachable and adaptable to the changing project needs, they stated they found me very organised and responsive. The quality of my work was rated as very good, with an explanation that it was still very early on in the project, but that the pilot interviews were delivered to a high standard.

To conclude the pilot phase of the project, the developed materials, transcripts and recommendations were shared with the client via email and a face to face meeting was scheduled

to discuss how the pilot phase went and the outcomes. In the meeting the client agreed that they would take on board all recommendations I had suggested. They also explained that the ▇▇▇ Health and Wellbeing team and the board of directors were extremely pleased with the work I had produced to date and hoped I would be available for phase 1 of the project and beyond. I have accepted to continue to be involved in the project on the conditions that I may need to step out of the project should external commitments arise. As a result of the level of work I have produced to date, I have been invited to join ▇▇▇s Health and Wellbeing Roadmap Steering Group to ensure a health psychologist perspective is considered throughout the project development of other similar health and wellbeing projects, of which I have accepted.

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APPENDICES

PRIVATE AND CONFIDENTIAL

A project proposal for

████████████████████████████████████

(███████)

Contributing to the Railway Health and Wellbeing Roadmap

Prepared for:

████████████, Project Manager Workforce, Health & Wellbeing, ████

Prepared by:

Tilean Clarke

Tel: ████████████

Email: ████████████████████

Date: 7th August 2014

Contents

Goals and Objectives

The objectives of the project suggested are:

1. Scope out how ▮▮▮▮ should engage with the railway workforce in regards to health and wellbeing initiatives and /or their personal health.
2. Scope out how ▮▮▮▮ can support managing directors to implement or improve health and wellbeing within their organisation.
3. Produce a report which encompasses how the scoping feeds into the Railway Health and Wellbeing Roadmap.
4. Develop an executive resource to support managing directors on improving health and wellbeing within their organisation.

The project will help ▮▮▮▮:

- **Explore** current perceptions of implementing health and wellbeing strategies within the railway workforce.
- **Understand** barriers to and facilitators of health and wellbeing within the railway workforce.
- **Establish** the ideal levels of information and channels of communication of health and wellbeing for the railway workforce and their managing directors.
- **Identify** areas where managing directors can be supported in improving health and wellbeing within their workforce.

Solution

▮▮▮▮ has received initial buy in and confidence from a range of stakeholders in the railway industry of the importance of health and wellbeing, making now the optimum time to invest and investigate the best strategy to implement health and wellbeing projects.

This proposal sets out how Tilean Clarke will work with ▮▮▮▮ as a consultant delivering these projects with the ultimate aim of supporting the effective implementation of the Railway Health and Wellbeing Roadmap.

The following methodology is recommended to stimulating some fresh thinking and establish a clear understanding of how ▮▮▮▮ can engage and support the railway workforce, including managing directors in improving health and wellbeing in their organisation. It will entail an integration and synthesis of both audiences to provide a holistic understanding of the findings and importantly, of the most motivating concepts, and creative potential solutions to any hurdles these concepts may face.

Starting with an initial kickoff meeting to confirm the detailed objectives underpinning this project I, Tilean Clarke will set out to conduct initial literature research to establish a base context. Following this, a series of interviews with Health and Wellbeing Strategy stakeholders will take place to

determine how to support managing directors implement and improve the health and wellbeing within their organisation. Focus groups with a sub sample of the industry, will be conducted to determine how best to engage with the railway workforce in regards to the health and wellbeing initiatives and /or their personal health.

The next phase of activity would include producing a report which encompasses how the scoping feeds into the Railway Health and Wellbeing Roadmap. This would include preparing a first draft report, collating and incorporation of one round of feedback from the Health and Wellbeing Project Manager and other key stakeholders and presenting on the final report.

The final stage of activity will involve the development of a resource to support managing directors on improving health and wellbeing within their organisation. This resource will be informed by the information gained during the scoping. This would include preparing a first draft version of the resource, collating and incorporation of feedback from the Health and Wellbeing Project Manager and other key stakeholders and preparing a final written draft of the resource, which will be provided to ████ to co-ordinate the design and production of the final product.

Joint accountabilities

███████████, Project Manager Workforce, Health and Wellbeing, █████ would be responsible for internal scheduling, reasonable access to key personnel, and reasonable access to past and current documentation that would aid the project. I, Tilean Clarke will be the project lead on all aspects of this consultancy project reporting directly to ███████████, Project Manager Workforce, Health and Wellbeing, ██████.

Although not anticipated, we should both agree to immediately appraise each other of any intelligence or findings that would impact the success of the project so that rapid action could be considered.

Measurements of success

Progress toward the objectives will be measured by:
• Feedback opportunities created for the railway workforce and managing directors
• Completion of the scoping, production of a report and development of the written content for an executive resource pack, receiving full sign off from ███████████ Project Manager Workforce, Health and Wellbeing, ██████ and other relevant professionals within ██████.

Project timeline

I envisage the following timings to conduct the project:

Phase	Deliverable	Timing (w/c)	Hours
Planning	Kickoff meeting	6/10/2014	1
Phase 1	Conduct research to establish a base context	13/10/2014 20/10/2014	14
	Interviews with HR Directors, Health and Safety Managers and Managing Directors, plus analyse outcomes (≤ 20 interviews, 45 minutes each)	27/10/2014 03/11/2014 10/11/2014	25
	Workforce focus groups (10 - 15 people per group) with a particular sector of the industry (x4 focus groups, 90 minutes each) and analyse outcomes	17/11/2014 24/11/2014	10
Phase 2	Produce report (estimated size 3000 words) and present findings	01/12/2014 08/12/2014	35
Phase 3	Development of an executive level resource to final draft stage. This will then be handed over to ▮▮▮▮ for branding, print and production.	15/12/2014 29/12/2014	35

Estimated Investment

The project will be charged at an hourly rate of £50 per hour (VAT not applicable).

The estimated investment required

To conduct the project outlined requires an estimated investment from ▮▮▮▮ of £6000 (excluding travel expenses, meetings/venue spaces (if required) to conduct interviews and focus groups).

Design and production of the executive resource will be covered by ▮▮▮▮.

Activity	Consultant, Tilean Clarke (£50 per hour)	
Planning: Kickoff meeting	1 hour	£50
Phase 1: Research and data collection	49 hours	£2450
Phase 2: Report	35 hours	£1750
Phase 3: Executive resource	35 hours	£1750
Total	**120 hours**	**£6000**

Next steps

I hope that this proposal sets out in more detail how we could potentially work together and the estimated investment required from ████. Once we are in agreement and should ████ wish to proceed, please see below for next steps:

- Accept the proposal as is or discuss desired changes.
- Finalise and sign the agreement contract.
- Submit initial payment of 50% of total project fee.

Once these steps have been completed the project will begin with a kick off meeting to introduce relevant personnel and begin preliminary project activities.

Terms and Conditions

The fees quoted are for the services as set out in this proposal document; any changes made at the client's request may result in additional fees.

The fees quoted will be invoiced as follows:

- 50% on acceptance of our quotation
- Final 50% on completion of the project

Unless otherwise agreed, all invoices are payable within 30 days of the date of invoice.

In the event of cancellation or postponement of the project once commissioned, a fee may be charged to cover the costs of all work undertaken and commitments made up to the time of receipt of formal notification of the cancellation from the client.

As a Health Psychology Professional, all aspects of the project will be performed in accordance with the Health and Care Professional Council and the British Psychological Society.

This agreement becomes effective only when signed by ████ and Tilean Clarke.

Acceptance

Your signature below indicates acceptance of this proposal and its terms.

This proposal is accepted and forms an agreement between _____ (████) and Tilean Clarke.

_____ (Sign) _____ (Print) _____ (Date)

_____ (Sign) _____ (Print) _____ (Date)

PRIVATE AND CONFIDENTIAL

A project proposal for

███████████████████████████████████

(███████)

Contributing to the Railway Health and Wellbeing Roadmap

Prepared for:

███████████, Project Manager Workforce, Health & Wellbeing, ████

███████████████, Health and Wellbeing Specialist, █████

Prepared by:

Tilean Clarke

Tel: ███████████

Email: ████████████████████

Date: 16th October 2014

Contents

Goals and Objectives

The objectives of the project suggested are:

5. Define and recognise line managers' roles and responsibilities in health and wellbeing and gain an understanding of their training needs.
6. Develop an understanding of line managers' current workloads and the barriers this may present in terms of their own health and wellbeing and developing the skills to support others.
7. Scope out how ▮▮▮▮ can support line managers through training provisions to improve health and wellbeing within their team.
8. Produce a report which encompasses what the scoping research has found.
9. Develop a health and wellbeing competency framework, which will include industry specific education and competence requirements.

The project will help ▮▮▮▮:

- **Explore** current perceptions of health and wellbeing for line managers within the railway workforce.
- **Understand** barriers to and facilitators of health and wellbeing for line managers within the railway workforce.
- **Identify** areas where line managers can be supported in improving health and wellbeing within their team.
- **Establish** the minimum level of health and wellbeing training required for line managers in the railway industry to support team resilience and well being.
- **Communicate** health and wellbeing training needs to line managers in the railway workforce using a competence framework.

Solution

▮▮▮▮ has received initial buy in from a range of stakeholders in the railway industry of the importance of health and wellbeing, making now the optimum time to invest and investigate the best strategy to implement health and wellbeing projects.

This proposal sets out how Tilean Clarke will work with ▮▮▮▮ as a consultant delivering these projects with the ultimate aim of supporting the effective implementation of the Railway Health and Wellbeing Roadmap.

The following methodology is recommended to stimulating some fresh thinking and establish a clear understanding of how ▮▮▮▮ can engage and support line managers within the railway workforce, in improving health and wellbeing in their organisation.

I, Tilean Clarke will set out to conduct initial research to establish a base context, of the health and wellbeing roles and responsibilities of line managers in the railway industry and the associated training needs. Following this, a series of interviews with Occupational Health professionals and/or

line managers within the industry will take place to determine how line managers can be supported to implement and improve the health and wellbeing within their team through training provisions. Interviews will also uncover potential barriers to undertaking training that may currently exist for line managers. The next phase of activity would include producing a report, of approximately 3000 words which encompasses the findings. The final stage of activity will be the development of a health and wellbeing competency framework for line managers which will enable health and wellbeing development. This resource will be informed by the information gained during the research and initial interviews with relevant industry professionals.

Joint accountabilities

███████████, Project Manager Workforce, Health and Wellbeing, █████ and/or ████████ ████████, Health and Wellness Specialist, █████ will be responsible for internal scheduling, reasonable access to key personnel, and reasonable access to past and current documentation that would aid the project. I, Tilean Clarke will be the project lead on all aspects of this consultancy project reporting directly to ████████████████, Health and Wellbeing Specialist, █████.

Although not anticipated, we should both agree to immediately appraise each other of any findings that would impact the success of the project so that rapid action could be considered.

Measurements of success

Progress toward the objectives will be measured by:
• Completion of the research and production of a report and development of the written content for a health and wellbeing competency framework for line managers.

Project timeline

I envisage the following timings to conduct the project:

Phase	Deliverable	Estimated timings	Hours
Pilot phase	Develop and test materials to conduct semi-structured interviews.	20/10/2014 - 09/11/2014	25
Phase 1	Interviews with Occupational Health professionals and /or line managers within the railway industry, plus analyse outcomes (approximately 20 interviews, 45 minutes each)	10/11/2014 - 30/11/2014	25
Phase 2	Produce report (estimated size 3000 words) and discuss findings with Health and Wellbeing Team, █████	01/12/2014 - 21/12/2014	35
Phase 3	Development of a health and wellbeing competency framework for line managers.	22/12/2014 - 09/01/2015	35

Estimated Investment

The project will be charged at an hourly rate of £50 per hour (VAT not applicable).

The estimated investment required

To conduct the project outlined requires an estimated investment from ▇▇▇▇ of £6000 (excluding travel expenses, meetings/venue spaces (if required) to conduct interviews and focus groups).

Activity	Consultant, Tilean Clarke (£50 per hour)	
Pilot phase	25 hours	£1250
Phase 1: Research and data collection	25 hours	£1250
Phase 2: Report	35 hours	£1750
Phase 3: Competency Framework	35 hours	£1750
Total	**120 hours**	**£6000**

Next steps

Following our initial meeting I hope that this proposal sets out in more detail how the project will be conducted and the estimated investment required from ▇▇▇▇. Please see below for next steps:

- Accept the proposal as is or discuss desired changes.
- Finalise and sign the agreement contract.
- Set up the most suitable process for payment

Once these steps have been completed the project will begin.

Health psychology competencies

Health psychologists are experts in applying psychological knowledge, research and interventions to promote and improve health and wellbeing in a range of settings. Taking a biopsychosocial approach, health psychologist understand health to be the product not only of biological processes, but also psychological, behavioural and social processes. In an occupational setting, health psychologists aim to understand how working conditions affect workers health and uncover ways to improve and/or protect workers health.

The current project with ▇▇▇▇ is directly relevant to the field of health psychology. The main aims of the consultancy are to 1) understand line managers' current workloads in the railway workforce and the barriers this may present in terms of their own health and wellbeing 2) uncover the skills required for line managers to protect/improve theirs and others health and wellbeing 3) Develop an

intervention in the form of a health and wellbeing competency framework to support line managers' health and wellbeing development for their roles. These aims are of direct relevance to the field of health psychology.

I am due to complete my training as a Health Psychologist on 30th January 2015 with London Metropolitan University, this consultancy project must come to an end no later than January 9th 2015. The consultancy must be conducted in a manner which fulfils the competencies required to qualify as a Health Psychology Consultant and include the ability to:

- Identify, priorities and agree expectations, needs and requirements of the client
- Review psychological literature and other information sources for relevant advice, research findings, research methods and interventions
- Assess feasibility of proposed consultancy
- Determine the aims, objectives, criteria, framework and scope of consultancy
- Produce implementation plans for the consultancy
- Establish contact with the client
- Develop, maintain and monitor working relationships
- Establish systems of processes to deliver the planned consultancy
- Implement the planned consultancy
- Close the consultancy, including documenting the results for the client
- Review the consultancy, including client's expectations and measurements
- Where necessary and with the client, implement changes indentified through the monitoring process of the consultancy
- Implement relevant quality assurance and control mechanisms
- Evaluate the impact of the consultancy

Terms and Conditions

The fees quoted are for the services as set out in this proposal document; any changes made at the client's request may result in additional fees.

In the event of cancellation or postponement of the project once commissioned, a fee will be charged to cover the costs of all work undertaken and commitments made up to the time of receipt of formal notification of the cancellation from the client.

As a Health Psychology Professional, all aspects of the project will be performed in accordance with the Health and Care Professional Council and the British Psychological Society.

This agreement becomes effective only when signed by ▬▬ and Tilean Clarke.

Acceptance

Your signature below indicates acceptance of this proposal and its terms.

This proposal is accepted and forms an agreement between _____ (████) and Tilean Clarke.

_____ (Sign) _____ (Print) _____ (Date)

_____ (Sign) _____ (Print) _____ (Date)

APPENDIX 3: RECRUITMENT TEMPLATES

RECRUITMENT TEMPLATE - LINE MANAGERS

Are you a line manager interested in developing ways to improve workplace conditions?

Would you be willing to share your thoughts on ways to improve health and wellbeing in the railway workforce?

███████ is working to understand whether health and wellbeing relates to line manager roles within the railway industry, and what could be done to support them.

What's involved?
A confidential short 30 minute face-to-face chat will take place at a time convenient to you.

Interviews are taking place with a number of line managers at a range of railway organisations and responses will be reported together, so no one other than ██████ will ever know how you personally responded.

What are the benefits of participating?
• You will have the opportunity to 'take time out' to share your thoughts on whether health and wellbeing relates to your role.
• You will be part of an instrumental process in developing a health and wellbeing training and best practice guidelines to support line managers within the railway industry workforce.

If you are interested in participating, or if you require further information, **contact Tilean Clarke**, Trainee Health Psychologist Consultant **on** ████████████ or █████████████████ , Health and Wellbeing Specialist, ██████ on ██████████████

RECRUITMENT TEMPLATE - HEALTH SPECIALISTS

Are you a health specialist interested in developing ways to improve workplace conditions?

Would you consider a central part of your role as providing health and wellbeing advice/support to line managers?

Would you be willing to share your thoughts on ways to improve health and wellbeing management skills for line managers?

███ is working to understand how health and wellbeing should relate to line manager roles within the railway industry, and what could be done to support them.

What's involved?

A short 45 minute face-to-face chat will take place at a time convenient to you. The interview will be strictly confidential and no one at your organisation will ever know how you personally responded. Interviews are taking place across the railway industry and responses will be reported together, and will not include any identifiable information. The information gained from the interviews will be the first steps in developing ways to support line managers with health and wellbeing through training and best practice guidelines.

What are the benefits of participating?

- You will have the opportunity to 'take time out' to share your expertise and thoughts on health and wellbeing management skills essential for line managers.
- You will have the chance to discuss the challenges that you feel line managers may have in developing their health and wellbeing management skills.
- You will be part of an instrumental process in developing a health and wellbeing training and best practice guidelines to support line managers within the railway industry workforce.

If you are interested in participating, or if you require further information, **contact Tilean Clarke**, Trainee Health Psychologist Consultant **on** ███████████ or ███████████████, Health and Wellbeing Specialist, ███████ on ███████████

APPENDIX 4: INTERVIEW PERFORMA

INTERVIEW QUESTIONS - LINE MANAGERS

Name: ………………………………………….……….…… Date of interview: ……………………
Time: ....

Job title: ....
Name of organisation: …………………………….............................

Introduction

Firstly, I would like to thank you for agreeing to speak with me about Health and Wellbeing as it related to your role.

I'm an Trainee Health Psychologist Consultant and I'm conducting research on behalf of the ████████████████████████████████ I will be speaking to a number of line managers from a range of railway companies as I am looking to understand how Health and Wellbeing relates to their roles, and what else could be done to support them in protecting their own Health and Wellbeing and their teams.

I expect my time with you today to last for about 30 minutes and I would like to record everything that is discussed – is that okay with you? I may need to refer to my questions on occasions too.

It is important to know that anything you say will be strictly confidential. Only myself and the Health and Wellbeing team at ████ will hear your responses. The content of our chat will be used together with the information gained from other line managers in various railway companies. This means that all the responses from line managers across the railway industry will be reported together, so no one will ever know <insert organisation> took part, let alone your personal responses. Do you have any concerns about confidentiality or the project at the moment?

I'll need for you to sign the consent form to confirm that I have explained the confidential aspect of this interview and you have had the opportunity to ask questions of clarity. It also means that you were happy to talk to me.

The information form is for you to keep. It gives you an overview of the purpose behind this work I am conducting with ████. It also has my contact details and ████s Health and Wellbeing team. Feel free to contact either of us if anything crops up after today that you'd like to discuss further or any other question(s) that may come to mind, we'd be happy to speak with you.

Before I begin, I just need to ask you a few questions about you and your role within your organisation. Tell me about your job role...

How long have your worked in the organisation and in your current job? (to the nearest month)

Organisation: ……… Years………Months

Current Job: ………. Years……….Months

How many hours do you actually work in a typical week? …………………………………
Is that on shift patter? Yes/No

In terms of Health and Wellbeing, how many and who do you support within the organisation?

1) What's your understanding of Health and Wellbeing as it relates to your role as a line manager?

Effect of heath on work; effect of work on health....

Psychological, physical and social effects...

Mental Health (anxiety / depression)	Noise induced hearing loss
Fatigue / shift patterns	Vibrations (HAVS)
Musculoskeletal disorders	Smoking/drinking onsite
Back pain (equipment / manual handling)	Work related stress (Team friction, workload,
Respiratory issues (fumes / dust)	training or lack of, unclear roles/responsibilities)
	Isolation

Probe:

As a line manager, what are the **three biggest** Health and Wellbeing **challenges** do you come across in your role?

2) Can you tell me about a what have you found to be effective in managing Health and Wellbeing in your team/ for yourself?

Probes:

Why do you think it was effective?

Does this contribute to a happy and healthy work team or in your opinion could more be done?

What are the constraints in doing more?

3) How do you identify and manage Health and Wellbeing risks/hazards?

Possible answers:

Health surveillance	OH specialist reports
Observations (e.g. tiredness, poor concentration etc)	Creating an opportunity to talk/discuss concerns
	Return to work interviews
Reflect and discuss	Welcome back employees after absence
Wait for employees to raise concerns / or manager raises concerns	Consider medication side effects
	Fitness to work plan
Absence reports	Health opportunities (physical activity / diet / wellbeing)
Health check survey	
Health assessments	

3) What support do you get to ease health risks?
(Such as manuals, training, other department support)

Probes:

Is this Health and Wellbeing support on-going? Does it help/not help?

Within your role, when would you contact health specialists (OH specialists, H&S, HR) for additional support?

4) Thank you so much for your excellent examples – they will be very helpful. Finally, **thinking about training and development, what has helped improve your Health and Wellbeing management skills?**

Probes:

What else would you find useful (training gaps)? Are they available? Barriers to access? How could they be alleviated?

What training is available? What are barriers to undertaking and how could they be alleviated?

Are you aware of any Health and Wellbeing initiatives in your organisation?

Examples of training:

Managing absence; resilience; reflection; people management; coaching; mental health and stress; health surveillance

<u>Conclusion</u>

Thank you very much for taking the time to participate. **Do you have any questions at this point?**

If any other questions come to mind at a later date and you want to talk about your contribution or the project in general then please do contact me (details on information sheet).

In terms of next steps, just so that you know what is going to happen to all of this information – I will be collecting experiences, such as yours, from other managers, and it will form the first step in understanding what line managers would find useful in terms of term and wellbeing training and

development for their roles. This information will be useful for people wanting to become line managers in the future too. This will be the beginning stages of the developing a Health and Wellbeing competence framework for line managers led by the Health and Wellbeing team with █████.

Would you be interested in helping with any of ████s **other work to improve Health and Wellbeing in the railway workforce?**

I would like to thank you again for taking the time to talk to me and contribute to this project.

INTERVIEW QUESTIONS - HEALTH SPECIALISTS

Name: ……………………………………………………   Date of interview: ……………………

Time: ....

Job title: ....

Name of organisation: …………………………….............................

Introduction

Firstly, I would like to thank you for agreeing to speak with me.

I am an Trainee Health Psychologist Consultant and I'm conducting research on behalf of the ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ I'm looking to understand how Health and Wellbeing relates to line manager's roles within the railway industry, and what else could be done to support them in protecting their own Health and Wellbeing and their teams. I will be speaking to a number of line manager's from a range of railway companies as well as health specialists like yourself in order to gain insight.

I expect my time with you today to last for about 45 minutes and I would like to record everything that is discussed - – is that okay with you? I may need to refer to my questions on occasions too.

It is important to know that anything you say will be strictly confidential. Only myself and the Health and Wellbeing team at ▮▮▮ will hear your responses. The content of our chat will be used together with the information gained from other health specialists and line managers in various railway companies. This means that all the responses from across the railway industry will be reported together, so no one will ever know <insert organisation> took part, let alone your personal responses. Do you have any concerns about confidentiality or the project at the moment?

I'll need for you to sign the consent form to confirm that I have explained the confidential aspect of this interview and you have had the opportunity to ask questions of clarity. It also means that you are happy to talk to me.

The information form is for you to keep. It gives you an overview of the purpose behind this work I am doing with ▮▮▮. It also has my contact details and ▮▮▮s Health and Wellbeing team. Please feel free to contact either of us if anything crops up after today that you'd like to discuss or that you have a question about, we'll be happy to talk to you.

Before I begin, I just need to ask you a few questions about you and your role within your organisation. Tell me about your job role...

How long have your worked in the organisation and in your current job? (to the nearest month)

Organisation: ……… Years………Months

Current Job: ………. Years……….Months

In terms of Health and Wellbeing, how many and who do you support within the organisation?

1) How does Health and Wellbeing relate to a line managers role in the industry?

Effect of heath on work; effect of work on health....

Psychological, physical and social effects...

Mental Health (anxiety / depression)	Noise induced hearing loss
Fatigue / shift patterns	Vibrations (HAVS)
Musculoskeletal disorders	Smoking/drinking onsite
Back pain (equipment / manual handling)	Work related stress (Team friction, workload,
Respiratory issues (fumes / dust)	training or lack of, unclear roles/responsibilities)
	Isolation

Probe: In your opinion, what are **their three biggest** Health and Wellbeing **challenges?**

Do you think they understand this? Are they able to cope with these? What would help them cope with these?

2) What should line managers be doing to manage Health and Wellbeing in their team and for themselves?

Probes:

Is this taking place? Where it's not taking place, why not? If it is taking place, what has lead to this?

Would this contribute to a happy and healthy work team? Or what else would need to be done?

3) How should line managers identify and manage Health and Wellbeing risks/hazards?

Possible answers:

Health surveillance	OH specialist reports
Observations (e.g. tiredness, poor concentration etc)	Creating an opportunity to talk/discuss concerns
	Return to work interviews
Reflect and discuss	Welcome back employees after absence
Wait for employees to raise concerns / or manager raises concerns	Consider medication side effects
	Fitness to work plan
Absence reports	Health opportunities (physical activity / diet /
Health check survey	wellbeing)
Health assessments	

3) What support is available to them?

(Such as manuals, training, other department support)

Probes:

Is this Health and Wellbeing support on-going? Do you think it helps or not? Why?

When should line managers contact health specialists (OH specialists, H&S, HR) for additional support?

4) In terms of Health and Wellbeing training, what should be compulsory for line managers, or those interested in becoming line managers?

Probes:

What other training would be useful for line managers, but are not necessarily essential for them to have when starting out as a line manager?

What about refresher training? Or is training once enough?

Are there any existing trainings that have helped improve Health and Wellbeing management skills?

What are the perceived barriers to accessing training? How could they be alleviated?

Any Health and Wellbeing initiatives in your organisation that would be useful for line managers to access to help with managing Health and Wellbeing?

Examples of training: managing absence; resilience; reflection; people management; coaching; mental health and stress; health surveillance

<u>**Conclusion**</u>

Thank you very much for taking the time to participate. **Do you have any questions at this point?**

If any other questions come to mind at a later date and you want to talk about your contribution or the project in general then please do contact me (details on information sheet).

In terms of next steps, just so that you know what is going to happen to all of this information – I will be collecting experiences, such as yours, from other health specialists as well as line managers, and it will form the first step in understanding what line managers would find useful in terms of term and wellbeing training and development for their roles. This information will be useful for people wanting to become line managers in the future too. This will be the beginning stages of the developing a Health and Wellbeing competence framework for line managers led by the Health and Wellbeing team with ▇▇▇▇.

Would you be interested in helping with any of ▇▇▇s **other work to improve Health and Wellbeing in the railway workforce?**

I would like to thank you again for taking the time to talk to me and contribute to this project.

APPENDIX 5: CONSENT FORM

CONSENT FORM

EXPLORING HEALTH AND WELLBEING MANAGEMENT SKILLS

Interviewer: Tilean Clarke, Trainee Health Psychologist Consultant

or ████████████████, Health and Wellbeing Specialist, ██████

2.   I confirm that it has been explained to me the purpose of this project and I have had the opportunity to ask questions.   ☐

3.   I understand that my participation is voluntary and that I am free to withdraw from the study at any time, without giving reason.   ☐

3.   I agree to take part in a short interview, for which I have been informed of how long it is likely to last.   ☐

_____   _____   _____

Name   Signature   Date

APPENDIX 6: INFORMATION SHEET

INFORMATION SHEET

EXPLORING HEALTH AND WELLBEING MANAGEMENT SKILLS

Interviewer: Tilean Clarke, Trainee Health Psychologist Consultant

What is the purpose of this project?

Management of employee Health and Wellbeing is an important challenge across the railway industry. Line managers have an important role to play in looking out for the Health and Wellbeing of the people they work with, but are they provided with the best support and tools to do this. This is the first phase of a project, by ████s Health and Wellbeing department which aims to explore Health and Wellbeing training needs for line managers. The project looks at the way line managers and health specialists currently view Health and Wellbeing within the industry roles, what training they have on this, what training they would like and where the gaps are. The overall aim is that we will be able to provide some best-practice guidelines and training where it is needed, and also be able to provide a competency framework for line managers/ those seeking promotion.

Will taking part in this study be kept confidential?

➢ Yes, taking part in this study will be kept confidential.
➢ Your answers will only be shared with ████'s Health and Wellbeing team.
➢ Under no circumstances will identifying information be passed on to anybody else.
➢ Responses are being collected from a number of line managers and health specialist from a range of railway companies across the UK.
➢ All the information collected is kept strictly confidential.
➢ Identifying information will be stored securely.
➢ Once the project is finished all identifying information will be destroyed.

What if I decide afterwards that I no longer want my answers included?

Interviews are taking place up until December 21st 2014. You can change your mind about taking part at anytime up until this date. Just contact us on the number below, stating your name and organisation to ensure your response is removed. You do not need to give a reason why you changed your mind.

Where can I find out more information on Health and Wellbeing management skills?

You can find a range of resources on ████s website that are designed to raise line manager awareness about Health and Wellbeing assessment.

Who can I contact if I have any further questions relating to this project?

If you have any questions regarding your participation in this project or the project overall, please feel free to contact either Tilean Clarke, Trainee Health Psychologist Consultant or ███████ ████████, Health and Wellbeing Specialist, ████.

Tilean Clarke	████████████████
Trainee Health Psychologist Consultant	**Health and Wellbeing Specialist,** ████
Mob: ███████████	Tel: ██████████
Email: ████████████████████	Mob: ██████████
	Email: ████████████████████████

Participant 1, Health Specialist, Wales   T = Interviewer
Interview time: 40 minutes; Recording time: 31 minutes, 21 seconds   X = Participant

[Introduction]

T: The specific research I am working on at the moment with ████ is health and wellbeing training for line managers.

X: Ok

T: ████ have a health and wellbeing road map they are working on at the moment and they have various stakeholders involved in that, █████████ is one of them actually and together through a range of workshops we explored what was really needed to try and improve health and wellbeing in the railway workforce. One of the things that came up was low levels of training that might exist for line managers. Often they work their way up and have the technical skills, but when it comes to health and wellbeing they weren't really sure. And so, really the purpose of this is to gain an understanding from health specialists and also line managers to see whether they even think about health and wellbeing within their role, what training they feel they would need or would like to have and even what would be the best method of delivery. So █████████ helped touch base with the right people to be involved in this discussion and so I am hoping to have several discussions across the railway industry, so it's not just █████████. There has been a lot of other interest from other railway organisations and all of this will be brought together so none of your responses will be shared with anyone other than ████s health and wellbeing team.

X: That's alright. Have you considered going down the delivery units too, because you'll probably get different and a more cross sectional range of managers from senior delivery managers, to section managers to engineers.

T: That would be useful. Do you feel they would be quite responsive and willing to engage in this project.

X: They would. I could certainly open the channels for you in two delivery units in the north part of the route. The variation in structure I think will be useful for maybe the delivery units to have that discussion. I think because what you probably missing here is that in this office we have a lot of strategic people and high end managers but in terms of getting a true flavour of the route and network itself, you'd need to get out and visit some of these places that do some of the delivery and their the people we need to really focus on in terms of how we manage the health of our people.

T: Definitely, that would be really helpful.

X: Yes I'm more than happy to do that. I will give you two key email addresses and you'd find them quite responsive they are quite high up in the organisation and they are responsible for the delivery and they can cascade it down to and I'll send you an email and those two people will get that sorted for you.

T: Ermm I have to give this to everyone I speak to as well [hand over information sheet and consent form]. That's a consent form and that's an information sheet that you can take away with

you and contact myself or ▮▮▮▮▮▮ if you have any questions after the project. The consent form asks if I've explained confidentiality and also signifies that you are happy to talk to me.

X: What date is it?

T: The 14th, nearly Christmas (both laugh)

X: Thank you, brilliant.

T: So you are health and wellbeing manager for the Wales route.

X: Yup.

T: So tell me a bit about that?

X: Obviously I mentioned just now [we spoke briefly before we were allowed to enter the room], I'm part of the strategic health, wellbeing and safety structure. And so although we've got a central core strategy, each route has its own devolved way of doing it. So effectively the centre devises the strategy but we can adopt that strategy according to what we think its purposeful for our devolved route. So where I sit, I'm part of the organisations safety, health and environment part of the route and like I said earlier on, certain elements I'll wear two hats I do a lot of health and safety work, I work with the health and safety manager but the main thing is I do have several strategic projects I have to deliver on.

T: Okay, right

X: One is the prevention of and certainly the control of HAVS and then there is mental wellbeing and improving access to that, and improve particularly managers knowledge of how they can support their work, who are suffering with wellbeing problems. I've also got a national project which is the health based risk assessment, so rather than the risk assessments for the hazards on the railway such as machinery and equipment for tracks and any other sort of things, I've got to do a health based risk assessment plan, on how the health of individuals can be effected by different risks. HAVS is a perfect example, musculoskeletal problems, respiratory problems cause by silica dust for example and mental health and those sort of things, such as stress and how that impacts.

T: Ok

X: I've got a project to do on that which I'm in the process of writing a gap analysis and then we'll put our improvement plan for that then. Ermm in terms of other projects I've got, like I explained to you just now I'm doing a Wales route project on fatigue. So all these type of things are a range of the things I do but also amidst those strategic projects is basically changing the culture of the workforce and making them more aware of health promotion and health information we've got out there. So it's getting them more in tuned with the fact that if you do have an unhealthy lifestyle, or if you do have a healthy lifestyle and have access to support services, that information is there to give people more choices to improve their health and wellbeing.

T: So how do you feel health and wellbeing is currently viewed in the workplace.

X: What I think is traditionally health and wellbeing is looked at as a fluffy add on to the really hard stuff of health and safety. The purpose, well certainly from my perspective is getting them to understand, and gain a better understanding of their health and wellbeing and what they can do about it, and in terms of their actual safety in their job. What I don't do is ermm preach at them and tell them to eat five pieces of fruit a day and all that sort of stuff or make them do aerobics before they start their shift, I don't do any of that, but what I do is I give them the tools. Here you are,

you're an adult you know the risk and everybody knows the risk of not exercising and not eating healthily and smoking and all that sort of stuff, I just say here you are, here is the information and I provide them with links and tools, but what I don't do is lecture them or send millions of emails which are likely to end up being viewed as spam.

T: Yea definitely

X: It's just, if you go down that approach, that these are the tools, these are the things you can do to improve health then you are less likely to be viewed as soft fluffy things, the nice to do and more likely to be viewed as strategic to the organisation. That's the way I look at it.

T: Yep, erm and in regards to the health based risk assessment that you spoke about. Is this something that is new to ███████████?

X:Yes it would be.

T: Do you feel this is considered at the moment when they do risk assessments.

X: What we do, although we do risk surveillance we do patchy bits of health surveillance in looking at how we protect against respiratory dust, noise, and HAVS but what the purpose of this project is, is to allow managers to be in a situation, if there is the potential risk to an employee that they are able to do that risk assessment for it. So they've got a definitive template on a document or whatever, so they can say that every employee working on the track they can say that these are the hazards and this is what we can do to control those risks associated with those hazards. They will have a greater understanding or a universal understanding of the risk, so they can say well he is at risk of vibration, he might not be at risk of noise, but he may be at risk to being exposed to dust, he may be at risk of being exposed to diesel fumes, all of that would be covered in the risk assessment. So each employee works out of a safety critical environment. There will be a snap shot really of what risks that individual is exposed to and how we can control those risk.

T: Okay, that sounds like it will be really useful. In terms of line managers roles in the industry, especially where we have spoken about the delivery units as well, how do you feel they currently view health and wellbeing. Is it that fluffiness you spoke about?

X: Ermm it's a mix and match. I think that yes, they can see all the fluffy things. They wouldn't for one minute remove vending machines, they would probably get lynched. What they want, they want their workers to be fit, they want their workers to be healthy and they want them to be safe, you know. And obviously safety overrides everything, but you know they are supportive. But what you'll find is when it comes to sort of preaching about health and wellbeing you'll find they will never say don't eat those chips, eat some fruit, or have you done any exercise today, you know they won't ask those questions. They are aware you know, I think there is a general awareness, in terms of how they need to keep their employees well and fit, but I don't think for one minute they would start to preach to them about what they need to do to attain those levels of fitness. They would support them, they would support them through anything. If an employee came to them tomorrow and said you know, I want to give up alcohol or I want to give up smoking or whatever, they would help support them through that process. If they came to them and said you know I'm suffering with stress, or I'm feeling stressed out, managers again will put they support system in place. While not necessarily understanding the concepts of health and wellbeing they would certainly have the support networks in place to certainly do that and help.

T: Do you think they get enough help, is there access at the moment for line managers in how to support people through change?

X: There is none, as far as I can tell, apart from on the training portal, there are some... how you can manage stress, how you can manage fatigue in your workforce. But I think there is not a great deal out there in terms of providing training to managers and how they can gain that wellbeing support and this is one of the things I'm working on. We are starting on the HAVS we have a route improvement plan which I'll be working on in a minute, which for the route, one of the area managers will say there will be training for managers in terms of how they will detect their employees risk of HAVS in their job. Again we'll be putting in this to erm train managers to train managers to identify stress in their workers and obviously help them to understand how they can signpost. There will be training on the horizon. That's something that will be worked on in the new year in terms of mental health training for line managers.

T: For line managers, what do you feel are there biggest health and wellbeing concerns are?

X: Well probably stress because any organisation that undergoes constant change and you've got a workforce that does shifts, double back shifts, long hours. I think stress is a key one, I think musculoskeletal problems is the second one because I think in a workforce the types of hazards their exposed to vibratory equipment, the environment they work in where their knees and ankles are knackered. You know, the two key ones for me are stress and musculoskeletal, those are the things that concern managers the most.

T: Do you think they are able to cope with those as effectively as they would like to?

X: Ermm, I think they probably think they have got enough supportive mechanisms in place to sort of help them tick over very nicely. However the only time they will sort of appreciate how well they are controlling it, is if people are off on long term sick with problems. Ermm or you've got a cohort of workers who are suddenly stressed. Suddenly then it will hit home to a manager oh maybe we're not controlling it as well as we could. In every aspect of health I'm sure managers are wholly supportive and they have structures, or some structures in place, but maybe they are not as robust in terms of identifying them as well as they should.

T: What about their own health and wellbeing?

X: That is the problem, is that because with managers, ermm especially those that work on call, especially those who work long hours and work a lot of long and unsocial hours they're probably not aware of their own health and wellbeing, or support their staff. Because a lot of the support they put in place for their own staff, plus there own significant workloads effects them going forward. I'll give an example, the fatigue project that I've done. I've analysed the fatigue of very senior managers and erm they presented the highest risk of fatigue and their fatigue index was through the roof, very high in the organisation, of who are supposed to be very senior in the organisation are meant to be are key safety leads, yet there diverse behaviours are not doing them any good, because a) its effecting their health and b) its effecting their decision making processes potentially that they are involved in as strategically as managers, because there is a bit of work I've done on that and there is an action plan together with the executives. Some of those people, like executives are as guilty as anybody else. Sending emails at 11.30 at night or 3 o clock in the morning and that sort of stuff and when you analyse their fatigue it's like wow, hang on a minute

your send out a safety message to people, and your fatigue index is absolutely through the roof, so yes, they may not necessarily be aware of their own health and what they need to do to improve it because they are too wrapped up. It's all very well preaching but they are wrapped up in their own little world. You see I'm different I've worked in this type of industry and worked in health and I understand from my perspective if I don't exercise or I don't eat properly, I don't get sufficient levels of rest it will affect me. And when I finish work or at lunch time I'll probably go to the gym and then when I finished work tonight at around 5ish, I stop and these people don't. They eat at their desks and work until 11.30 at night. The biggest problem is and my worry is that it sort of filters down so you've got the very very senior management like that, and then you've got the senior management and then you've got the section management they behaviour like that, they will send out an email at 3 o clock in the morning and then it goes to the next manager, who will look at it and he'll feel devoted to respond as well and so those habits are filtering down and percolating, so effectively you have a tier of management who are acting in really unhealthy ways.

T: That's a really interesting concept of how its filtering down. What do you think could help support them or their understanding?

X: I mean it's about me having a conversation with them and explaining what the risks are you know in terms of how it effects their health and also providing graphical demonstration of when I feed their hours through a fatigue index what that actually means and what it means to a) their health and b) their decision making process, which means they are no longer able, for the long term able to keep going, as they have in the past and as senior strategic managers it has a knock on effect for them and the business and its having that conversation with them and saying if you are not changing the behaviours, your health is going to suffer, your no longer going to be effective, but also your behaviours are peculating down and effecting other parts of the organisation. So that conversation is the only way you can change it.

T: So, do you feel line managers, do they connect with yourself or is it occupational health, in terms of support and advice with health and wellbeing?

X: I think there is a lot of peer support amongst line managers, what you'll find is that line managers would have invariably worked at the core face, gone up into line managers, they still have that peer support, if one of them is not well or if one of them is struggling. They are fully aware that any sort of health issues or any query and they invariably do. I do get quite a lot of queries from this to the other, like from people complaining of the toilet waste on trains and how's that going to affect my health and I don't see it beneath me to answer those questions, it's very important and so yea I will get queries and they know that I am the head of this.

T: One of the things that ▮▮▮▮ is thinking about is in regards to changing the culture in the workplace, is if someone was interested in becoming a line manager that they would know what health and wellbeing training they could do in order for them to be more successful and comfortable in a manager role and look after their own health and wellbeing too, as well as their team. What would you say that in your opinion is the training that would be needed, that would be compulsory in an ideal work.

X: Training for line managers should almost certainly be the identification of stress amongst the work force, that needs to be absolutely compulsory. It is the biggest factor and that in itself can

lead to so many unhealthy habits because its hidden and it's very difficult to pick up and I think that also you'll find that there is elements of stress amongst the workforce and managers shy away as they don't know how to deal with it, so it becomes work. So it's ermm I would say that one is key, absolutely key. In terms or peer group training and support my idea is that in the new year, I have special interest in developing health champions, which doesn't necessarily have to be line managers, it can be if they want to but ermm its about getting key people in each area that workers can go to if they have a specific problem, they have a question or something they are worried about, it could be things to do with any of their actual physical health. There will be a little bit of training we will do there, but in terms of what I've done with other organisations in the past, I've done a lot of line manager briefs on what types of things you need to do to assess stress in people, what you can do to support them and also how you assess your own behaviours and how that interacts and causes stress, and also surrounding line manager competencies and they do find that quite valuable. We use the HSE guide online to help identify competencies and we do that exercise with them and they come out of that and think your absolutely right and they can actually see that the way they behave can affect the stress of their employees.

T: What about barriers in accessing any training that would be available on health and wellbeing training? I'm thinking, if their fatigue levels are high and working unsociable hours as well, how do you think we can get health and wellbeing training to them, making it appear significantly important and where they feel like okay I really should access this and make time for this to do it.

X: I think as long as there is an organisational commitment to do it , then it's absolutely fine and you know the next layer of manager will allow those individuals to do that. Because what we've got is a time resource issue is that everyone is busy, everyone is flat out and got significant projects and workloads and god knows what else, and then amidst that pack diary then someone says we are going to do this half day training on mental health, you know they'll say you know I don't have time for that and I just can't find the time to do it and they will just push it to the back. It's about getting that organisational commitment and saying that this is important and it is absolutely important and its part of your development as a manager and look at it as any other sort of development type of training. And look at it as a positive development step for you as a line manager and that should be embedded within that process within their appraisals and in their development plan and that's the only way really you are going to get them to take it seriously really and if it is just an optional thing to go on, they won't be bothered, where as if a manager says you need to go on that its part of your development as a manager, you have to do it, then that's a different thing all together and then it will be taken seriously you know.

T: That's really useful. When should line managers contact health specialists, or occupational health or HR?

X: I think it's a question of where they've got gaps in their knowledge, ermm like I said there is a lot of managers that know their workforce and know their people and a good manager knows how to support their people and can say these are the risks and this is what we are going to do to control those risks, whether they are physical or mental or whatever, erm but there are times when you've got complexities or gridlocks, which you can't unlock. I think when it becomes difficult protracted or complex, that's when you'll find they will call on mine or HRs help, you know we've got few long

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term sick I provide advice to managers on how to unlock that. And for all the help in the world the information they get back from our occ health providers isn't very good and that, so Ill provide more detail in terms of how they can sit down with their person with advice they have, and say what do think about this in terms of rehabilitation and brining someone back into the workplace, which they don't get from the occ health providers.

T: So are the occ health providers external as well?

X: Yes, so you know it's about when you get gaps or you get complexities or you get difficulties which managers cant unlock that's when a lot of it would come to me and in terms of the non health issues that they can't unlock they go to HR. It's about when they need to deal with the more difficult things that's when they will ask for advice.

T: OK, that's been really useful. That's covered everything for me really. Do you have any questions for me?

X: No.

T: Thank you, you have been really helpful, in terms of me trying to get a good understanding of health and wellbeing in the railway workforce and delivery units will be really key.

X: I think you'll find that really useful, obviously we can give you a flavour at a strategic health level, but I think that erm as with anything, the only way you'll really get a true picture is to speak with the boots on the ground, especially managers who have been there and done it who would have been exposed to these things themselves.

T: Thank you

[Debrief]

Participant 2, Male Line Manager, Wales   **T = Interviewer**

Interview time: 35 minutes; Recording Time: 24 minutes, 24 seconds   **X = Participant**

[Introduction]

T: Tell me about you current job, so Programme Commercial Manager

X: Yes I'm Programme Commercial Manager

T: So, what does that mean?

X: I head up a team of about 25 people, mainly Commercial Managers, like Surveyors and work for Infrastructure Projects

T: OK

X: So my team look after the Commercial Planning and controls functions of building projects. So you've got a Project Management team who are making sure that its built to time and on schedule and built safely and then my team works with them to make sure it's on cost and budget and all to dates and everything like that so….. so I've got a team of about 25 people

T: Oh wow, and how long have you been doing this particular role?

X: Two years and two months.

T: Oh right OK cool, going well yeah?

X: Yes, yes I'm enjoying it

T: Good, good… so before that time was you with the organisation ▌▌▌▌▌▌▌?

X: No I'm new to ▌▌▌▌▌▌, I spent 20 plus years working as chartered surveyor working for a construction company.

T: Construction, I understand health and wellbeing issues in the construction industry can be quite similar as well.

X: Yes

So do you work Monday to Friday?

X: Yes

T: Ok , great - and what about the surveyors, Is that similar?

X: Yes commercial managers, we're all office base, work Monday to Friday

T: Ok, so in terms of health and wellbeing how do you feel it relates to your role in regards to the industry, because at ▌▌▌▌ we're looking at healthy and wellbeing in terms of psychological factors distress that may occur or physical or social which might affect some if their work is quite isolated

X: I think it relates to everybody's role cause you've got a personal responsibility for your own health and wellbeing, as a line manager, that's compounded by having a responsibility for your staff as well. So I think it's very important

T: Yeah, so what do you feel as a line manager your challenges, top 3 challenges are in regards to health and wellbeing?

X: Challenges are probably trying to getting people to open up

T: Ok

X: Whilst you know you can come to me if you've got problems etc… and we're always here to talk and you can train yourself as an empathetic person, sometimes people, you've got to encourage a culture where people are prepared to talk about that their struggling with their work or there've got

problems at home, they need support or their not comfortable with their role or happy in their relationships. So really the biggest challenge is that making sure that everybody is comfortable to discuss on that level and that an environment where it's okay to say that you're not happy is nurtured really. That's probably a big challenge. It is a challenge to make sure that, it's the age old challenge of competing tensions of work life balance in getting that right, that's always a challenge, but if you see it as a positive challenge rather than a negative challenge then it becomes a lot easier.

And suppose the third one then is encouraging staff to take up training courses because it's difficult to see some of the people come up through the ranks. It's difficult really because its soft skills and sometimes you can't teach people soft skills you know, particularly when you're dealing with people with different emotionally intelligence.

T: Yes...

X: Sometimes people can't always see the affect that they have on other people

T: Definitely, that's a really key point actually, and it's how to get that across about how peoples characters can effect emotions

X: Yes, how their emotions can affect other people

T: Yes, it's quite interesting the first point you make as well about getting people to be more comfortable and open up, which I think is a great point. In regards to your role, do you feel this is something you bought to your role or has ▮▮▮▮▮▮▮ supported you to develop these skills?

X: I wouldn't say that they have supported me but they have raised the profile of it, because we can all be so often be consumed by our day job and cultures can be created where people's feelings are secondary, but I wouldn't say that they have physically supported me, but they have created a culture where its regarded as important to see how people are feeling about it. They have certainly created a culture and supported me that way, I believe. And by promoting it to other people and have health and wellbeing people within the route, with a lot on initiative we do at the moment. So I certainly feel they've certainly created the culture.

T: Great, great that's brilliant because I imagine across the railway organisation it varies. ▮▮▮▮▮ ▮▮ seem quite ahead in regards to health and wellbeing, leading with some best practices so it's really good that that's it's fostered.

X: Certain like IP because I can't speak for other parts of the business such as maintenance or whatever, but certainly in IP I think we've taken the whole health & wellbeing agenda quite far and a step from it not just being health & safety rules & regulations it's about the person and the behaviour side of it as well as just the legislation side as well.

T: One of things we are thinking about is if people are aspiring to be line managers, what are the types of training that could be offered that could be beneficial to them in understanding health and wellbeing for them to be able to do their job. You spoke of the challenges of creating an open environment, but in your opinion, what type of training or support do you feel line managers should have in terms of health and wellbeing to support them in their role?

X: I feel there's not really much of need for training, I feel as long as the culture is created, there aware, that there is access to library, procedures and ask specialist when you need them. And then generally it's down to creating a culture and then having support if needed really. To go on a

course to tell you how to deal with people or to go on a course to tell you do this is all down to you as a person. I know you can have 360 degree feedback sessions etc. which can be useful but really it's about your skills as a manager in dealing with emotions and people and understanding how staff wish to be treated.

T: Great point, I think the importance of that culture to be able to nurture health and wellbeing and so it feels acceptable. What about in terms of your health and wellbeing do you feel supported, because I know you're supporting others as well.

X: Yeah , I think I don't have a lot of interaction with my line manager about it. My line manager is a director, but I'm 100% confident that if I had an issue that he would create time and resolve that issue for me. You know I've been a manager for 15 - 20 year, so I've got a lot of experience and I'm quite a resilient person, so I don't feel I need a lot of support and I have regular one to ones with my manager even if it means just going for a walk around the block for a little chat, so whilst he doesn't offer a lot of support I know that if I had a problem or if I needed his support or needed guidance that it would be there for me.

T: Good. And what have you found affective in managing health and wellbeing in your team. Is it the things that you spoke about the challenges, is that also kind of what you've been using?

X: Yes, I believe in leading by example as well, and as a manager leading by example, you know, something small that I've done recently is that I've asked my staff to stop sending e-mails after 7 o clock a night. I know there's no need for that as I was the one that was probably sending e-mails after 8 o clock at night. I didn't realise that if I send an e-mail to a junior member of staff, I wasn't expected a reply or at enlisting a reply that time of night, perhaps they would reply tomorrow but perhaps I'm then putting them under pressure by e-mailing them that time of night so, I think as a manager you just have to lead by example really.

T: That's a really good point about how it filters down.

X: I manage line managers as well you know I'm a band 2 person and manage band 3s and I'd like to

think that it cascades down directly

T: Yeah definitely… and do you feel there is any constraints in the workplace that could prevent having a healthy happy team really, any other constraints that you might not have mentioned…

X: It's not a constraint but getting that work life balance is difficult because work can be cyclical. We are not a factories that got to turn out at least 20 cars a week, but sometimes we can be pushed, because we got, like Easter time we have to block aide of the railway and everybody is working long hours, so yes, I think the cyclical nature of our work can sometimes can create busy times and quite times. And also something that we do, do as well we tend to as a company have a lot of reorganisations and I think that can effect morale and bring concerns to people sometimes, but they are not general constraints with the way the company is structured, but now and again we can review that busy periods we can have, we can have quiet periods, we can have periods of certainty and then we can have periods of uncertainty, so things like that can be obstacles along the way, along the journey but not actual full time constraints

T: Okay, so how would you or how do you identify any health and wellbeing risk that your team may have or any hazards within your team? Are there things that are currently used to try and identify that or is it general observations?

X: Probably just speaking to your staff. I've got a rule with my one to ones with my staff. We have a system called OP projects and every contract in IP has a project number and I say to my staff if you come to me and ask me something which I can put a OP number in front of, in other words a contract number I don't want to talk about that in the one to ones. The one to one are about you, you know I don't want to talk about a project, that this jobs has gone wrong, because we should be doing that every day. Speak to your staff say that this one to one is about you and any problems you may have, but if you're going to start talking about projects I'm going to stop you talking about it.

T: Yeah that's really a good point

X: You know it's about creating time to talk to people and asking them how they are and creating a culture we're they feel they can tell you if there not well. Don't get me wrong it's hard for some people. How many times do you ask somebody, how's everything and they say I'm fine, I'm fine, great, great, are they happy? It's like when I do my team meeting with my staff you know you say any topics anyone else wants to cover and they say nope. It takes some people a lot of time to come to terms with a transparent way of working. That level of transparency where they can tell you when they are not happy with something, you know you can't tell your manager you're not happy. So it is taking a lot, so even though we are creating that culture, as a line manager I do create that culture it is taking some people longer than others to become comfortable with that. I think one member of staff actually said, at a performance review, when I said how do you think you've done, and how the year been for you, how do you think you've performed and I was told well that's not for me to say you're the manager. So I like saying how's the year gone for you, how do you feel it's gone, and that's as important as how I feel because if they think it's gone brilliantly and I don't think it's gone so great, we've obviously got an issue between our communication. So it's important for me to see it from there point of view, but for some people they do struggle and some people are struggling more than others to sort of adapt to that sort of way, of challenging your line manager or speaking out and getting away from the yes sir, no sir sort of culture really.

T: Really good points you have raised and I can really see how you do all you can to create that open relationship and create a culture within your department where health and wellbeing is of ultimate importance. Across the board in the railway industry, I'm guessing that may not be the case for all line managers as well, and in your opinion do you feel that some line managers should have those skills naturally in order to be a line manager, or could they have mandatory training that could help them develop these important skills.

X: It depends what band manager, because to me, when you sort of reach senior level like I'm at, your technical ability is almost a given and then the softer skills, the people management skills are why you should be in that job and the fact you're the best quantity surveyor or the best bridge designer or whatever, is kind of irrelevant because you're now in that role, because yes you've had a grounding as a bridge manager, designer or surveyor, but know you're in that role to be a leader. And to be a leader of people you need to understand people and manage people and to me

technical ability is a given, and what makes you a good manager is your ability to erm recruit, maintain and motivate within a team really.

T: Great. Within your role, is there anyone you feel you can contact in terms of health specialists, or health or safety?

X: I deal a lot with our health and safety manager and he was the one who had a chat with me about the late night emails and we have a HR business partner and what we do now in our senior team, there is 10 of us in our senior team and we are band 1 and band 2s, but we invite our HR business partner and health and safety manager who are band 4s into our senior management team, so we are looking at it together, so we are not just sitting there, head of commercial, head of engineering, we're also bringing in HR and we're also brining in health and safety, into all decision we make as a senior team. So the views of the specialist practitioners, help inform the decisions we make as a senior team.

T: Great. And I'm really interested in the example you provided of the 7pm, no emails after that, what spurred the senior team to start thinking of that.

X: The Health and Safety manager mentioned that to me.

T: Really interesting.

X: Because we've got a lot of incidents recently of accidents because of fatigue. We've had very nasty incidences where four of our guys were leaving the site, our sub contractors leaving the site and they were involved in an terrible traffic accident and we've had quite a few issues really when we have looked into people haven't rested between shifts etc. So you know, we have a real drive on at the moment, to make sure that people are encouraged that if they are going to a site in North Wales which is a four hour drive you don't drive four hours, work eight hours and drive four hours back, you book a hotel, so we've got very much a drive on about concentration and fatigue to make sure even if they are office people they are resting between shifts.

T: That's good. Do you feel that there is anything you would find useful or that line manager would find useful to fill gaps in their understanding and delivery of health and wellbeing.

X: No I don't really. I think it's very much down to you as a line manager, if your told to do this, or told to fill this form in or sent on this training course, that's only... you know if you look at development of a person it's in a ratio of 70, 20, 10. 70 is the percent of self learning, 20 percent is through networking and 10 percent is training. That 10 percent is just a small part. It's really down to you really as an individual and you know, to make sure that we have the right people who care about themselves and care about their staff and recognise the importance of health and wellbeing on the agenda. It's about getting the right people really and at that senior level.

T: It sounds like culture therefore has a big impact on how health and wellbeing is view. In your time here at ████████ do you feel the culture has always been there for health and wellbeing or have you seen it grown and develop?

X: I've seen a massive change in the last year really, it's become much higher on the agenda. I think before safety was one dimensional we always thought that safety just meant no accidents and whilst we still regard that as critical that we have no accidents I think we now as a company understand that safety is only one part of it and we've got to protect people on a wider level, people in the environment, and we've got a mantra of everybody home safe, everyday, which is great but

if I get home safe, but I'm ill or upset or stressed or I'm working 60 hours in a week, you know they might be going home safe but you know we've recognised that safety isn't one dimensional and that it's wider than people not having accidents and it's a growing agenda. I think we are at a start of our journey and I think that journey has gather momentum a lot in the last 12 month.

T: That's good and refreshing to hear the developments there. What about health and wellbeing initiatives then in the organisation.

X: There's dozen really, we've had the health monitoring point here recently, blood pressure stuff, sports days. Also our health and safety manager has arranged virtual teams, where we are walking around Wales virtually to see how far around Wales we can get in five and a half weeks and just lots of things like that really. And obviously I know we have various sort of weeks, mindfulness is very much high on the agenda at the moment, personal resilience is high on the agenda, but yea we just seem to be doing lots more around wellbeing really. Also the fatigue management is high in our own world at the moment so yes there is lots of little and big initiatives really.

T: That's really helpful and you've given me a great overview of what health and wellbeing means to you. Any questions?

X: I've got one question for you. Generally people like myself have a great interest and a passion for it and that's why we volunteer. How are you going to get the views of the people who perhaps dissented. I guess if people thought they were being mistreated they would come to you as well perhaps, or at least I'd like to think they would. But how are you going to get the views of the sort of the average, well not average, I mean people like me will come and happy to talk all day about health and wellbeing because I feel passionate about it, but how you going to understand what other people's views are out there, those people who haven't bothered to volunteer are you going to do random samples, what you thinking?

T: We're still looking into that. The initial conversations I am having are with Health Specialists or those line managers that have brought themselves forward, but we are interested in getting out on the ground and how we get out to them and perhaps it does need to be another method.

X: We do have a thing called, have you heard of our safety bus?

T: No

X: We have a thing called a safety bus in ███████████ and it goes around various sites and it gives out to people briefings or there are different kinds of initiatives etc and you could use something like that. A similar thing where you travel round in the safety bus and people can come in and just chat to you really, because obviously it's great to start with senior managers as well, but then speak to the voice of the people really too.

T: Brilliant idea. Thank you that's really useful.

[Debrief]

[Introduction]

T: Tell me a bit about your role, so what's a route commercial manager, what do you do?

X: So I am a route executive on the route and I oversee a department that manage the customer and contractual relationships with Arriva Trains Wales, as well as supporting all our other customers that work on the route. so that's one function within my department. I also then look after the measurement and accuracy of delay attribution and then I also am lead sponsor for a range of £250 million enhancement schemes on the rail route and I have a team to lead that for me and I also deliver or oversee the delivery of change programmes within the route, so big transformational change, whether its people, processes or systems. So that's my role.

T: Ok, so it's quite a broad role.

X: Yes and I manage a team of about 35 - 40 people.

T: And your hours are typically Monday to Friday.

X: Yes, kind of normal business hours and it's the same for my team. One of my team supports the events that take place at Cardiff Central with the millennium stadium so she might work on a Saturday to support Arriva in the operation of the station, in which case she'd have a day of in the week in lieu or that sort of thing, but the majority of the team is Monday to Friday.

T: And within your role, how long have you been within your role.

X: 14 months.

T: Great and how's it going?

X: Good, and very busy.

T: So what about within ▮▮▮▮▮▮▮

X: In ▮▮▮▮▮▮▮ just over 11 years

T: Oh wow, great, so you know the industry and you would have seen the change in health and wellbeing over the years in the industry

X: Oh yes

T: How would you say, you feel health and wellbeing relates to your role as a line manager?

X: I think I see it as really important, because for me I kind of link it back to work life balance as well and obviously your role as a line manager it's about ethically supporting your team as well, with any personal issues or anything like that so yea I think that's really important, in kind of just getting the balance right and I know sometimes it's not always possible or doesn't always work out, or people like to work in different ways as well, but yes I think it's really important.

T: And what about the biggest challenges you feel you have as a line manager with health and wellbeing within your team. What are your three biggest challenges?

X: So with health and wellbeing specifically?

T: Yes, so thinking about in terms of perhaps it might be around the psychological wellbeing around stress or work related pressures, or perhaps physical wellbeing, in terms of might worry you about your team or your team might bring to you.

X: Ok, so I think on the stress one, I think I have had on one of the elements of my department, I've had a team whose work load has increased massively over the last 12 months and obviously the hours of the day aren't any longer and so there have been quite a few occasions were there has been quite a lot of stress, where they have had to work longer hours to get to meet deadlines, to get the work done. There have been certain deadlines missed as a result and all the rest of it. And the team are really conscientious and they want to do a good job and so they go away and they think about it and dwell on it and all that kind of stuff. So I've worked with them to help reprioritise their work load so they can manage that. I've also actually managed to get through a business case to increase the team size to get more people in and that's happening now and people are being recruited so that's really good. Ermm but yea a key thing on the stress front has been about prioritising and trying to focus peoples tensions to meet their deadlines and also to actually, I have told some of my team, that by 6 o clock go home, so just turn the blackberry off and I don't want to hear from you until 9 o clock tomorrow. And some people I have to be quite forthright with, because they would rather go home and work until 10 or 11 o clock at night to get it done and so that's been a bit of a challenge

T: Yes of course

X: Ermm, but then I think they've developed a bit as well and learnt that I can't keep going at that level. Ermm and so that's on the stress front and my team have also used, you know we have an HR direct service within ▉▉▉▉▉▉?

T: No

X: So they are a call centre for advice and guidance to help us with HR things and so one of my direct reports he had one of his team members was suffering with stress so he used that HR service to support him managing his team member and I think that was helpful and worked quite well. So that's ok the stress front. And in terms of the more physical things, quite a lot of my team will go out for lunch, or for a walk and things like that and I'm quite keen that they do that. I tend to never have a lunch break but I try and say to my team going have a lunch break, go on and get on and do that, but I probably need to do more of that myself I think.

T: Yes well that's one of my questions as well, because as a manager your providing support and sometimes managers can almost whatever pressures or constraints, don't have the chance to live the values themselves really and how do you find yourself dealing with that and what are the challenges you find there?

X: I need to probably, but it's the demands and priorities of the job, but I think I don't do, but I should probably do more to force myself and take a lunch break or to force myself to get away from my desk erm to have some lunch and also fatigue can be a bit of an issue cause long hours and travelling can be very much there. But I also know I need to try and switch off more when I go home and so the blackberry gets turned off and as a route executive team we have started a quite informal but a situation where we try not to send any emails after 7 o clock in the evening or before 7 o clock in the morning to try and a) help give us a bit of self discipline and also to try and lead from the front, so that if our team don't get emails from us then they won't feel the urge to respond there and then, and that sort of stuff, which has been the case, so we've started that, so that's work in progress

T: Great, and you've been in the organisation for a while and ▮▮▮▮▮▮ is good, because you do have health and wellbeing specialists you can turn to, how do you feel it has changed, what's change in regards to health and wellbeing in ▮▮▮▮▮

X: Well, I'm its talk about for a start. In the last kind of year to 18 months, before then the kind of concept of health and wellbeing, whether it was used under a different language or terminology maybe but it wasn't, it didn't really have a voice, but now it's a lot more high profile and only yesterday we had a health kind of service, a health gym thing in the office yesterday, offering reflexology, massages and that, so I booked myself in for a neck and shoulder massage and erm, for 10 minutes and that was really good, so there's thing like that and we've got these electronic scales, there not here all the time, but they are kind of on a road show and you can sort out your body mass index, so that's really kind of up the ante I suppose on the awareness of it, it's changed massively.

T: Has that helped you as a line manager, in your understanding and how to support people?

X: Yes I think it makes us think about it more. There is always stuff going on so its quite easy for one thing to drop off the radar or something but I think it's a lot more, ermm seen as very important now, than it was before, which is good.

T: What about, thinking back to when you became a line manager or think of a person aspiring to be a line manager, in terms of resources what would be helpful and should be available to help people understand and get that understanding of wellbeing within their role?

X: I think some form of facilitated course would be useful, ermm, for example, this isn't health and wellbeing, but I recently went on a diversity and inclusion course for a day, and you talk about, so use diversity and inclusion as an example ermm we talk about it a lot, we do different sessions on it, but for me having that one day really brought it to life. And it kind of made you go, aw god yea and it kind of clicked. And I think that's a similar thing with health and wellbeing, that we can talk about it a lot, but for me it should be part of your checklist of things to do as part of becoming a good line manager, as part of developing your skills set and competencies as a line manager rather than a technical expert, than I think that would be a really useful addition to peoples, kind of personal development portfolio.

T: Yes, and having the ability and time to go to training, like the diversity and inclusion, is that sometimes a struggle to find opportunities to do that?

X: Yes, yes, absolutely, and I think if you've got a dedicated course, like 1 day or half day or whatever it is you know that, that's time to focus on it then and it helps let it sink in, because there is lots of messages on health and wellbeing on connect and stuff, but you don't always have the time to read it or digest it, you know, so ermm, so I think that would be useful as a future thing.

T: Good, okay so who would you contact to support you if you felt you needed support in health and wellbeing, do you have access to that?

X: Yes, so we've got Antony Thomas [health and wellbeing manager] is our route, so yes I'd go to him or to our head of safety in our route, who Antony works for, so I'd go to one of those.

T: Great, you've really help me understand what it means to you health and wellbeing and line managers what could support them in terms of training and development, which will be useful to the workforce. [Debrief].

Comments. What's interesting?	Transcription	Emerging themes
	[Introduction]	
	T: The specific research I am working on at the moment with ▮▮▮ is health and wellbeing training for line managers.	
	X: Ok	
	T: ▮▮▮ have a health and wellbeing road map they are working on at the moment and they have various stakeholders involved in that, ▮▮▮▮▮ is one of them actually and together through a range of workshops we explored what was really needed to try and improve health and wellbeing in the railway workforce. One of the things that came up was low levels of training that might exist for line managers. Often they work their way up and have the technical skills, but when it comes to health and wellbeing they weren't really sure. And so, really the purpose of this is to gain an understanding from health specialists and also line managers to see whether they even think about health and wellbeing within their role, what training they feel they would need or would like to have and even what would be the best method of delivery. So ▮▮▮▮ helped touch base with the right people to be involved in this discussion and so I am hoping to have several discussions across the railway industry, so it's not just ▮▮▮▮▮▮. There has been a lot of other interest from other railway organisations and all of this will be brought together so none of your responses will be shared with anyone other than ▮▮▮s health and wellbeing team.	
There might be differences in the responses depending on the type of work the managers are doing. Consider delivery units, different and more cross sectional range of	X: That's alright. Have you considered going down the delivery units too, because you'll probably get different and a more cross sectional range of managers from senior delivery managers, to section managers to engineers.	Organisational hierarchy effecting responses

managers		
	T: That would be useful. Do you feel they would be quite responsive and willing to engage in this project.	
Strategic managers responses may be different to those working in the delivery units. Need to balance response by visiting and exploring delivery section as well high end managers	X: They would. I could certainly open the channels for you in two delivery units in the north part of the route. The variation in structure I think will be useful for maybe the delivery units to have that discussion. I think because what you probably missing here is that in this office we have a lot of strategic people and high end managers but in terms of getting a true flavour of the route and network itself, you'd need to get out and visit some of these places that do some of the delivery and their the people we need to really focus on in terms of how we manage the health of our people.	Organisational hierarchy effecting responses
	T: Definitely, that would be really helpful.	
Delivery units senior managers will be quite responsive. They can engage others by cascading information down.	X: Yes I'm more than happy to do that. I will give you two key email addresses and you'd find them quite responsive they are quite high up in the organisation and they are responsible for the delivery and they can cascade it down to and I'll send you an email and those two people will get that sorted for you.	
	T: Ermm I have to give this to everyone I speak to as well [hand over information sheet and consent form]. That's a consent form and that's an information sheet that you can take away with you and contact myself or ▮▮▮▮▮▮ if you have any questions after the project. The consent form asks if I've explained confidentiality and also signifies that you are happy to talk to me.	
	X: What date is it?	
	T: The 14th, nearly Christmas (both laugh)	
	X: Thank you, brilliant.	
	T: So you are health and wellbeing manager for the Wales route.	

	X: Yup.	
	T: So tell me a bit about that?	
The health and wellbeing strategic function sits within health and safety; hierarchical approach to health and wellbeing; each route has own devolved way of doing things	X: Obviously I mentioned just now [we spoke briefly before we were allowed to enter the room], I'm part of the strategic health, wellbeing and safety structure. And so although we've got a central core strategy, each route has its own devolved way of doing it. So effectively the centre devises the strategy but we can adopt that strategy according to what we think its purposeful for our devolved route. So where I sit, I'm part of the organisations safety, health and environment part of the route and like I said earlier on, certain elements I'll wear two hats I do a lot of health and safety work, I work with the health and safety manager but the main thing is I do have several strategic projects I have to deliver on.	A devolved approach to health and wellbeing; link with health and safety
	T: Okay, right	
Prevention and control is important; HAVS; mental wellbeing; improving access to services; improving knowledge of how to line managers can provide health and wellbeing support and identifying who needs support; health based risk assessments; musculoskeletal problems; respiratory problems; stress	X: One is the prevention of and certainly the control of HAVS and then there is mental wellbeing and improving access to that, and improve particularly managers knowledge of how they can support their work, who are suffering with wellbeing problems. I've also got a national project which is the health based risk assessment, so rather than the risk assessments for the hazards on the railway such as machinery and equipment for tracks and any other sort of things, I've got to do a health based risk assessment plan, on how the health of individuals can be effected by different risks. HAVS is a perfect example, musculoskeletal problems, respiratory problems cause by silica dust for example and mental health and those sort of things, such as stress and how that impacts.	Improving access to services; improving support; improving knowledge; implementing structures and processes; mental wellbeing; musculoskeletal problems; respiratory problems; HAVS; the need for health and wellbeing risk identification
	T: Ok	

Fatigue; changing the workforce; making them more aware of health promotion and health information; health information that provides choice to improve their health and wellbeing	X: I've got a project to do on that which I'm in the process of writing a gap analysis and then we'll put our improvement plan for that then. Ermm in terms of other projects I've got, like I explained to you just now I'm doing a Wales route project on fatigue. So all these type of things are a range of the things I do but also amidst those strategic projects is basically changing the culture of the workforce and making them more aware of health promotion and health information we've got out there. So it's getting them more in tuned with the fact that if you do have an unhealthy lifestyle, or if you do have a healthy lifestyle and have access to support services, that information is there to give people more choices to improve their health and wellbeing.	Fatigue management; changing the organisational culture; improving awareness; empowerment and control; improving knowledge; improving access to services
	T: So how do you feel health and wellbeing is currently viewed in the workplace.	
Fluffy add on to health and safety is a perspective that needs to be changed and is changing; improving understanding on how people can take charge of own health and wellbeing; the importance of not lecturing and preaching	X: What I think is traditionally health and wellbeing is looked at as a fluffy add on to the really hard stuff of health and safety. The purpose, well certainly from my perspective is getting them to understand, and gain a better understanding of their health and wellbeing and what they can do about it, and in terms of their actual safety in their job. What I don't do is ermm preach at them and tell them to eat five pieces of fruit a day and all that sort of stuff or make them do aerobics before they start their shift, I don't do any of that, but what I do is I give them the tools. Here you are, you're an adult you know the risk and everybody knows the risk of not exercising and not eating healthily and smoking and all that sort of stuff, I just say here you are, here is the information and I provide them with links and tools, but what I don't do is lecture them or send millions of emails which are likely to end up being viewed as spam.	Link with health and safety; changing individual perspectives; improving knowledge; empowerment and control; perceived uselessness of preaching
	T: Yea definitely	
Changing perceptions on the view of health and wellbeing in the organisation so it is	X: It's just, if you go down that approach, that these are the tools, these are the things you can do to improve health then you are less likely to be viewed as soft fluffy things, the nice to do and more	Changing the organisational culture

viewed as strategic to the organisation not a nice to do or fluffy thing.	likely to be viewed as strategic to the organisation. That's the way I look at it.	
	T: Yep, erm and in regards to the health based risk assessment that you spoke about. Is this something that is new to ██████████	
	X:Yes it would be.	
	T: Do you feel this is considered at the moment when they do risk assessments.	
The need for health risk surveillance; the use of a template or document could be supportive to implementing processes and improving universal understanding of health risks; safety critical environment is important	X: What we do, although we do risk surveillance we do patchy bits of health surveillance in looking at how we protect against respiratory dust, noise, and HAVS but what the purpose of this project is, is to allow managers to be in a situation, if there is the potential risk to an employee that they are able to do that risk assessment for it. So they've got a definitive template on a document or whatever, so they can say that every employee working on the track they can say that these are the hazards and this is what we can do to control those risks associated with those hazards. They will have a greater understanding or a universal understanding of the risk, so they can say well he is at risk of vibration, he might not be at risk of noise, but he may be at risk to being exposed to dust, he may be at risk of being exposed to diesel fumes, all of that would be covered in the risk assessment. So each employee works out of a safety critical environment. There will be a snap shot really of what risks that individual is exposed to and how we can control those risk.	The need for health risk identification; implementation of structures and processes; empowerment and control; improving knowledge
	T: Okay, that sounds like it will be really useful. In terms of line managers roles in the industry, especially where we have spoken about the delivery units as well, how do you feel they currently view health and wellbeing. Is it that fluffiness you spoke about?	

	X: Ermm it's a mix and match. I think that yes, they can see all the fluffy things. They wouldn't for one minute remove vending machines, they would probably get lynched. What they want, they want their workers to be fit, they want their workers to be healthy and they want them to be safe, you know. And obviously safety overrides everything, but you know they are supportive. But what you'll find is when it comes to sort of preaching about health and wellbeing you'll find they will never say don't eat those chips, eat some fruit, or have you done any exercise today, you know they won't ask those questions. They are aware you know, I think there is a general awareness, in terms of how they need to keep their employees well and fit, but I don't think for one minute they would start to preach to them about what they need to do to attain those levels of fitness. They would support them, they would support them through anything. If an employee came to them tomorrow and said you know, I want to give up alcohol or I want to give up smoking or whatever, they would help support them through that process. If they came to them and said you know I'm suffering with stress, or I'm feeling stressed out, managers again will put they support system in place. While not necessarily understanding the concepts of health and wellbeing they would certainly have the support networks in place to certainly do that and help.	
Extreme measures which impose health and safety onto employees would not be welcomed; Managers provide support if an employee raises a concern as they want their workers to be fit and healthy, but they do not preach how to do this.		perceived uselessness of preaching; reactive support
	T: Do you think they get enough help, is there access at the moment for line managers in how to support people through change?	

Training portal offers some assistance; the need for training on how to gain wellbeing support and identifying stress; mental health training; training seen as a good thing; route improvement plans	X: There is none, as far as I can tell, apart from on the training portal, there are some... how you can manage stress, how you can manage fatigue in your workforce. But I think there is not a great deal out there in terms of providing training to managers and how they can gain that wellbeing support and this is one of the things I'm working on. We are starting on the HAVS we have a route improvement plan which I'll be working on in a minute, which for the route, one of the area managers will say there will be training for managers in terms of how they will detect their employees risk of HAVS in their job. Again we'll be putting in this to erm train managers to train managers to identify stress in their workers and obviously help them to understand how they can signpost. There will be training on the horizon. That's something that will be worked on in the new year in terms of mental health training for line managers.	Stress management; stress identification; fatigue management; HAVS; need for training on obtaining health and wellbeing support; the need for health and wellbeing risk identification; mental health training; implementation of training
	T: For line managers, what do you feel are there biggest health and wellbeing concerns are?	
Stress is a key challenge - where organisational change, shift patterns and long hours can impact; musculoskeletal problems - the strains of the physical demands of the job	X: Well probably stress because any organisation that undergoes constant change and you've got a workforce that does shifts, double back shifts, long hours. I think stress is a key one, I think musculoskeletal problems is the second one because I think in a workforce the types of hazards their exposed to vibratory equipment, the environment they work in where their knees and ankles are knackered. You know, the two key ones for me are stress and musculoskeletal, those are the things that concern managers the most.	Impact of work on stress; environmental impacts of work on health and wellbeing; musculoskeletal problems
	T: Do you think they are able to cope with those as effectively as they would like to?	

Managers potentially not recognising they need support in areas of health and wellness until they need to deal with long term sickness or stress; supporting managers to put in place structures to foster a health and wellbeing environment	X: Ermm, I think they probably think they have got enough supportive mechanisms in place to sort of help them tick over very nicely. However the only time they will sort of appreciate how well they are controlling it, is if people are off on long term sick with problems. Ermm or you've got a cohort of workers who are suddenly stressed. Suddenly then it will hit home to a manager oh maybe we're not controlling it as well as we could. In every aspect of health I'm sure managers are wholly supportive and they have structures, or some structures in place, but maybe they are not as robust in terms of identifying them as well as they should.	Lack of awareness of support needed; implementing structures and processes; the need for health and wellbeing risk identification
	T: What about their own health and wellbeing?	
Lack of awareness for own health and wellbeing in senior managers and the impact this has on other aspects of work and life; fatigue due to hours and work pressures, and its impact on productivity such as decision making; workloads and providing support to employees can put a strain on managers; poor health and wellbeing behaviours filter down to other employees through management	X: That is the problem, is that because with managers, ermm especially those that work on call, especially those who work long hours and work a lot of long and unsocial hours they're probably not aware of their own health and wellbeing, or support their staff. Because a lot of the support they put in place for their own staff, plus there own significant workloads effects them going forward. I'll give an example, the fatigue project that I've done. I've analysed the fatigue of very senior managers and erm they presented the highest risk of fatigue and their fatigue index was through the roof, very high in the organisation, of who are supposed to be very senior in the organisation are meant to be are key safety leads, yet there diverse behaviours are not doing them any good, because a) its effecting their health and b) its effecting their decision making processes potentially that they are involved in as strategically as managers, because there is a bit of work I've done on that and there is an action plan together with the executives. Some of those people, like executives are as guilty as anybody else. Sending emails at 11.30 at night or 3 o clock in the morning and that sort of stuff and when you analyse their fatigue it's like wow, hang on a minute your send out a safety message to people, and your fatigue index is absolutely through the roof, so	Lack of awareness about own needs; fatigue management; the impact of management responsibilities; the effects of poor health and wellbeing behaviours on performance; filtration of management behaviours; lack of awareness of health and wellbeing

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	yes, they may not necessarily be aware of their own health and what they need to do to improve it because they are too wrapped up. It's all very well preaching but they are wrapped up in their own little world. You see I'm different I've worked in this type of industry and worked in health and I understand from my perspective if I don't exercise or I don't eat properly, I don't get sufficient levels of rest it will affect me. And when I finish work or at lunch time I'll probably go to the gym and then when I finished work tonight at around 5ish, I stop and these people don't. They eat at their desks and work until 11.30 at night. The biggest problem is and my worry is that it sort of filters down so you've got the very very senior management like that, and then you've got the senior management and then you've got the section management they behaviour like that, they will send out an email at 3 o clock in the morning and then it goes to the next manager, who will look at it and he'll feel devoted to respond as well and so those habits are filtering down and percolating, so effectively you have a tier of management who are acting in really unhealthy ways.	
	T: That's a really interesting concept of how its filtering down. What do you think could help support them or their understanding?	
The usefulness of graphical demonstrations; illustrating how behaviours effect performance and how management behaviour can filter down the organisation; health specialists having those conversations is important	X: I mean it's about me having a conversation with them and explaining what the risks are you know in terms of how it effects their health and also providing graphical demonstration of when I feed their hours through a fatigue index what that actually means and what it means to a) their health and b) their decision making process, which means they are no longer able, for the long term able to keep going, as they have in the past and as senior strategic managers it has a knock on effect for them and the business and its having that conversation with them and saying if you are not changing the behaviours, your health is going to suffer, your no longer going to be effective, but also	Effective methods of knowledge translation; filtration of management behaviours; a devolved approach to health and wellbeing

	your behaviours are peculating down and effecting other parts of the organisation. So that conversation is the only way you can change it.	
	T: So, do you feel line managers, do they connect with yourself or is it occupational health, in terms of support and advice with health and wellbeing?	
informal peer support between managers; managers present health and wellbeing queries to those they consider health specialists	X: I think there is a lot of peer support amongst line managers, what you'll find is that line managers would have invariably worked at the core face, gone up into line managers, they still have that peer support, if one of them is not well or if one of them is struggling. They are fully aware that any sort of health issues or any query and they invariably do. I do get quite a lot of queries from this to the other, like from people complaining of the toilet waste on trains and how's that going to affect my health and I don't see it beneath me to answer those questions, it's very important and so yea I will get queries and they know that I am the head of this.	Perceived usefulness of peer support; seeking help and support from specialists
	T: One of the things that ■■■■ is thinking about is in regards to changing the culture in the workplace, is if someone was interested in becoming a line manager that they would know what health and wellbeing training they could do in order for them to be more successful and comfortable in a manager role and look after their own health and wellbeing too, as well as their team. What would you say that in your opinion is the training that would be needed, that would be compulsory in an ideal work.	

	X: Training for line managers should almost certainly be the identification of stress amongst the work force, that needs to be absolutely compulsory. It is the biggest factor and that in itself can lead to so many unhealthy habits because its hidden and it's very difficult to pick up and I think that also you'll find that there is elements of stress amongst the workforce and managers shy away as they don't know how to deal with it, so it becomes work. So it's ermm I would say that one is key, absolutely key. In terms or peer group training and support my idea is that in the new year, I have special interest in developing health champions, which doesn't necessarily have to be line managers, it can be if they want to but ermm its about getting key people in each area that workers can go to if they have a specific problem, they have a question or something they are worried about, it could be things to do with any of their actual physical health. There will be a little bit of training we will do there, but in terms of what I've done with other organisations in the past, I've done a lot of line manager briefs on what types of things you need to do to assess stress in people, what you can do to support them and also how you assess your own behaviours and how that interacts and causes stress, and also surrounding line manager competencies and they do find that quite valuable. We use the HSE guide online to help identify competencies and we do that exercise with them and they come out of that and think your absolutely right and they can actually see that the way they behave can affect the stress of their employees.	
training on the identification of stress; stress leading to other unhealthy behaviours; health champions that employees can talk to and training people to be health champions; line manager briefs on a range of health and wellbeing topics; the importance of mapping training to line management competencies to provide greater sense of achievement		The need for training; stress identification; stress management; perceived usefulness of peer support; Improving knowledge ; imbedding training into development processes; changing individual perspectives
	T: What about barriers in accessing any training that would be available on health and wellbeing training? I'm thinking, if their fatigue levels are high and working unsociable hours as well, how do you think we can get health and wellbeing training to them, making it appear significantly important and where they feel like okay I really should access this and make time for this to do it.	

Creating a culture that fosters health and wellbeing knowledge and learning; if there is no culture created it wont be seems as a priority due to busy schedules; important to embed into the developmental process for line managers and the appraisal systems in order for it to be taken seriously	X: I think as long as there is an organisational commitment to do it , then it's absolutely fine and you know the next layer of manager will allow those individuals to do that. Because what we've got is a time resource issue is that everyone is busy, everyone is flat out and got significant projects and workloads and god knows what else, and then amidst that pack diary then someone says we are going to do this half day training on mental health, you know they'll say you know I don't have time for that and I just can't find the time to do it and they will just push it to the back. It's about getting that organisational commitment and saying that this is important and it is absolutely important and its part of your development as a manager and look at it as any other sort of development type of training. And look at it as a positive development step for you as a line manager and that should be embedded within that process within their appraisals and in their development plan and that's the only way really you are going to get them to take it seriously really and if it is just an optional thing to go on, they won't be bothered, where as if a manager says you need to go on that its part of your development as a manager, you have to do it, then that's a different thing all together and then it will be taken seriously you know.	Changing the organisational culture; changing individual perspectives; imbedding the training into the development process
	T: That's really useful. When should line managers contact health specialists, or occupational health or HR?	

Managers should contact health specialists when they recognise they have gaps in their knowledge to support a specific case; occ health not providing the level of support to help managers with health and wellbeing; health specialists providing guidance on how to implement health and wellbeing rehabilitation techniques which are beneficial to the needs of the individual	X: I think it's a question of where they've got gaps in their knowledge, ermm like I said there is a lot of managers that know their workforce and know their people and a good manager knows how to support their people and can say these are the risks and this is what we are going to do to control those risks, whether they are physical or mental or whatever, erm but there are times when you've got complexities or gridlocks, which you can't unlock. I think when it becomes difficult protracted or complex, that's when you'll find they will call on mine or HRs help, you know we've got few long term sick I provide advice to managers on how to unlock that. And for all the help in the world the information they get back from our occ health providers isn't very good and that, so Ill provide more detail in terms of how they can sit down with their person with advice they have, and say what do think about this in terms of rehabilitation and brining someone back into the workplace, which they don't get from the occ health providers.	Seeking help and support from specialists; perceived lack of support from health specialists; health specialists as a knowledge and support resource
	T: So are the occ health providers external as well?	
Having a health specialist separate from HR means health issues are directed to them and non health issues directed to HR	X: Yes, so you know it's about when you get gaps or you get complexities or you get difficulties which managers cant unlock that's when a lot of it would come to me and in terms of the non health issues that they can't unlock they go to HR. It's about when they need to deal with the more difficult things that's when they will ask for advice.	Health specialists as a knowledge and support resource
	T: OK, that's been really useful. That's covered everything for me really. Do you have any questions for me?	
	X: No.	
	T: Thank you, you have been really helpful, in terms of me trying to get a good understanding of health and wellbeing in the railway workforce and delivery units will be really key.	
Important to speak to lower level managers - potentially answers may be different	X: I think you'll find that really useful, obviously we can give you a flavour at a strategic health level, but I think that erm as with anything, the only way you'll really get a true picture is to speak with the	Organisational hierarchy effecting responses

	boots on the ground, especially managers who have been there and done it who would have been exposed to these things themselves.	
	T: Thank you	
	[Debrief]	

Themes	
Organisational hierarchy will effect responses	Perceived usefulness of peer support
A devolved approach to health and wellbeing	Imbedding training into development processes
Improving knowledge	Perceived lack of support from Health Specialist
Changing the organisational culture	Improving access to services
Improving awareness	Mental wellbeing
Empowerment and control	Musculoskeletal problems
Changing individual perspectives	Respiratory problems
Perceived uselessness of preaching	Fatigue managements
Reactive support	The need for health and wellbeing risk identification
Lack of awareness of support needs	Implementation of structures and processes
Lack of awareness of health and wellbeing	Hand Arm Vibration Syndrome (HAVS)
The effects of poor health and wellbeing behaviours on performance	Stress Management
Link with health and safety	Need for training on obtaining health and wellbeing support
Filtration of management behaviours	Lack of awareness about own needs
Effective methods of knowledge translation	Improving support
Seeking help and support from specialists	Stress identification
The need for training on health and wellbeing	Implementation of training
The impact of management responsibilities	Impact of work on stress
Health specialist as a knowledge and support resource	Environmental impacts of work on health and wellbeing

APPENDIX 9: REPORT

REPORT ON THE PILOT PHASE OF THE HEALTH AND WELLBEING TRAINING PROJECT BY TILEAN CLARKE, TRAINEE HEALTH PSYCHOLOGIST CONSULTANT

During the period of 20th October 2015 to 30th November 2014, I implemented the following activities in line with the requirements of the pilot stage of the consultancy.

1) I conducted research to establish a base context, including reviewing relevant literature and attending the ███ Health and Wellbeing Conference .

2) I developed the materials (see appendix 3 - 6) needed to conduct semi-structured interviews with line managers and health specialists, including:

- Recruitment templates (x1 for line managers, x1 for health specialist)
- Interview Performa (x1 for line managers, x1 for health specialist)
- Consent form
- Information sheet

3) I carried out pilot interviews to test the materials

4) I transcribed all the pilot interviews (see appendix 7).

5) I analysed one interview (see appendix 8)

6) I produce a report on the outcomes of the pilot, detailing recommendations (see appendix 9)

The pilot interviews went well and I was able to conduct three pilot interviews, one with a health specialist and two with line managers in the industry. The participants found the information sheet useful and the consent forms clear to read and understand. The interview Performa was set out in a clear way, that I was able to conduct the interview in a natural way rather than using a prescriptive style. The recording device worked well and the playback was clear and legible. The recruitment templates were also successful in gaining participants, and a list of participants for stage one of the project has been developed. As none of the materials needed to be altered again following the pilot, all three interviews can be included in the final analysis.

The transcribing of the pilot interviews enabled me to work out the best way to transcribe the materials and a transcribing software called Express Dictate Digital Dictation Software was useful to help control the playback of the recording whilst I was typing. My transcribing speed was approximately 1 hour for every 10 minutes of recording. Transcript one was analysed using Interpretative Phenomenological Analysis (IPA). IPA is a methodological tool commonly used by psychologists to focus on understanding individuals' experiences (Smith, 1996). Only one transcript provide an understanding to the client of the level of detail involved when analysing by IPA. The remaining two transcripts will be analysed once the rest of the data of phase one of the project has been collected. The analysis on Transcript one by IPA took a total of 6 hours, which involved familiarising myself with the transcript, making comments associated with the transcript and then detailing the emerging themes. It is likely that the process of analysing future transcriptions will not take as long, due to becoming familiar with the types of types emerging.

As a result of the pilot, the following recommendations were made:

- Transcribing of the interviews takes one hour for 10 minutes of recording. Although there is a benefit to the researcher transcribing the materials to strengthen familiarity with the content, it will take up a large part of the budget should the consultant continue to transcribe future interviews. It is therefore recommended that transcribing be completed by an administrator to save time and costs. The transcribe materials can then be handed back to the consultant in order to conduct the analysis.

- For pilot 1 of the project, it is recommended that there is a second coder involved to minimise the risk of bias. Due to ███████████████ experience with IPA analysis, it is recommended that if time commits, ███████ should become this 2nd code. If time doesn't permit, the services of a 2nd psychologist should be elicited to strengthen the analysis process and I am happy to recommend skilled psychologists to assist.

- Interviews conducted in phase one of the project should be done with different management levels, inclusive of health specialist, to gain an appreciation of the varied responses, in order for the intervention that is later developed to appeal to all managers.

APPENDIX 10: FEEDBACK

CLIENT FEEDBACK FORM

This form is to provide both the consultant and client and understanding of how we are working together and working towards meeting the aims of the project. For each statement, please write freely and honestly about the consultant's ability to meet the organisations needs and requirements for the related project.

Name of consultant:	Mrs Tilean Naomi Clarke
Name of company:	██████
Name of contact:	████████████, Health and Wellbeing Specialist.
Project title:	Health Training Project
Date:	December 2014

Quality of preparation of the consultancy

Please circle one which applies:

<mark>Excellent</mark>   Very Good   Good   Unsatisfactory

Please provide comment:

Tilean put together a comprehensive proposal, and was flexible when this needed to be amended or adapted. I felt Tilean had a clear understanding of our requirements and worked well to incorporate our feedback into her proposals. Overall I felt we had a very good match between what we were after and the consultancy that Tilean was able to provide.

Quality of the consultant

Please circle one which applies:

<mark>Excellent</mark>   Very Good   Good   Unsatisfactory

Please provide comment:

Tilean herself is warm, friendly, approachable and adaptable to the changing project needs. I felt Tilean was very easy to work with and was open to discussion and thinking around the project, as well as working within the outlined proposal. One element of working with Tilean which I most valued was her flexibility. This was really important as my schedule is hectic and the project needs were shifting slightly (especially in the formative stage) and Tilean was very amenable to the changes and took them in her stride which was great. Personally I have had every confidence that Tilean can do a great job and have been able to let her get on with it. We have been touching base and having debriefs as would be expected, but no further supervision has been needed. This has been of real benefit to me as my schedule would not have allowed for continued supervision and her independence and practical nature has been greatly valued.

Quality of work projects (including understanding and delivery of project requirements)

Please circle one which applies:

Excellent   Very Good   Good   Unsatisfactory

Please provide comment:

The project is still in very early stages and so it is difficult to comment on outcomes at this stage but so far Tilean's interviews have been to a high standard and have met the project brief.

Quality of administration (ability to contact consultant, logistical arrangements etc)

Please circle one which applies:

Excellent   Very Good   Good   Unsatisfactory

Please provide comment:

Tilean and I have been able to arrange regular conversations and 'debriefs' from interviews at appropriate timelines. Tilean responds to emails quickly and has been very organised with her dates and availability in order to offer as much to the project as possible which is great.

Are there any suggestions you would like to put forward to change/improve the delivery of the project?

Please provide comment:

At this stage I think Tilean's work is excellent and so I hope things will continue along the same track as they are currently. I have no suggestions for improvement at this time and am certain that Tilean's input will provide a really valuable foundation to our research project.

Any other comments

Just a thank you to Tilean for being such a pleasure to work with. I hope our paths continue to cross and that we can work together again in the future.

Thank you for thanking the time to complete this feedback form.

Tilean Clarke, Trainee Health Psychologist Consultant

SECTION C4

TEACHING AND TRAINING

COMPETENCY

DIVERSITY AND HEALTH PROMOTION LECTURE
MSC HEALTH PSYCHOLOGY STUDENTS

CONTENTS

CASE STUDY AND TEACHING PLAN

This case study describes how I planned, designed and delivered the MSc Health Psychology lecture, 'Diversity and Health Promotion', as part of the module Context and Applications of Health Psychology at London Metropolitan University.

5.1a   ASSESS TRAINING NEEDS

I assessed the learning needs by reviewing the module handbook which enabled me to understand how the lecture would fit within the module and reviewed the modules learning aims, objectives and assessment criteria. On the day of delivering the lecture, the training needs were assessed at various points, by asking questions such as 'how would you define health promotion?' and 'what is diversity?'. These questions enabled me to check students level of understanding before the lecture and served as a self assessment of the participants own learning needs in relation to the learning objectives (Dempster, 1997).

5.1b   DEVELOP THE STRUCTURE AND CONTENT

In order for the lecture to be a successful educational tool, preparation is a fundamental component (Domizio, 2008; Goodwin, 2003). I had eight and a half weeks from accepting to deliver the lecture, to develop the structure and content of the session, so I had adequate time to ensure the lecture was developed to meet the learning needs of the group. With the view that students will have a more positive attitude to learning when they believe what is being taught is directly relevant to their aims and objectives (Domizio, 2008), the module handbook was used as a starting point to understand what content needed to be covered and the suggested literature was reviewed to examine its relevance and how it fit in with the overall lecture content. The use of case studies in teaching and learning can improve knowledge about the real world, with lectures more enjoyable and beneficial (Iahad, Mirabolghasemi, Mustaffa, Latif and Buntat, 2013) and case studies can develop critical thinking skills (Popil, 2011). With this in mind, when formulating the content of the lecture, I incorporated real life examples of health promotion and diversity from my working life.

Once I had completed my first draft of the content of the lecture, I requested previous lecture slides from two other lecturers who had delivered this session in previous years at this establishment, to compare the content with the content and structure I had developed. Following review of the content from previous lectures, I made amendments to my content to include levels of prevention and health promotion, something which I had not included in my initial draft, but was part of the two previous lectures. Comparing and contrasting my slides with previous lectures was particularly useful, this was the first time I had developed the content of teaching material for university students, it increased my confidence in my teaching plan as a lot of the learning points were similar. It also highlighted my own creativity in the content and look of the slides. Reviewing other lecture slides after developing my initial draft meant I did not reduce my own creative take on the

lecture. Once the PowerPoint presentation content (see appendix 2, p. 295-301) was finalised, I practiced delivering the session by speaking out loud. Practicing also helped me highlight areas I felt would be great for discussion and questions, it also enabled me to check the content was clear and fitted in the time available (Domizio, 2008).

5.1c   SELECT APPROPRIATE TRAINING METHODS, APPROACHES AND MATERIALS

The teaching was delivered using a mixture of didactic and experiential methods to cater for a range of learning styles. I was attentive to the fact that the lecture was due to take place on a Friday afternoon following lunch, there would be potential for post-prandial stupor and students being less engaged (Domizio, 2008). I addressed this by adopting interactive methods of delivery at times throughout the lecture, which kept the students engaged adopting the 'learning by doing' approach to consolidate their learning, which is a more effective approach than passive listening (Exley & Dennick, 2004).

The lecture was designed to use experiential learning underpinned by Kolb's Learning Theory (Kolb, 1984). The theory works on two levels, a four stage cycle of learning (concrete experience, reflective observation, abstract conceptualization and active experimentation) and four separate learning styles (accommodating, diverging, assimilating and converging), (Kolb, 1975). Students with assimilator learning style prefer theoretical and logical soundness, converging learning styles prefer practical points of learning, those with accommodating learning styles prefer collaborative learning and diverging learning styles like group work and direct feedback (Ocepek, Bosnic, Serbec & Rugelj, 2013; Sharlanova, 2004). With this in mind, in addition to considering the different learning styles theorists, reflectors, activists and pragmatists (Honey and Mumford, 1982), the lecture was designed to incorporate a range of learning techniques, such as group exercises, video footage, PowerPoint presentation (Appendix 2, p. 295-301) and group discussion (see teaching plan, Appendix 1, p. 293-294). I also included time for silent reflection and thought processing, proceeding or following a discussion, video or group exercise. At various points throughout the lecture I included examples drawing on from my own experience. I encouraged the learners to share existing case studies they had come across externally, to improve understanding (Hakel & Halpern, 2005).

Although a variety of methods were adopted, due to PowerPoint being a preference in the lecture setting (Savoy, Proctor, Salvendy, 2009) PowerPoint was the main method of delivery, used to guide the session (see PowerPoint presentation, Appendix 2, p. 295-301) and provided an organised structure to the lecture, which would positively impact on students attitude and self efficacy (Susskind, 2005). Students were able to download the PowerPoint slides and reading list from the University's intranet before or after the lecture.

5.2a   FACILITATE LEARNING IN HEALTH PSYCHOLOGY

On the day I was due to deliver the lecture and facilitate learning in health psychology, arriving early allowed time to check the audiovisual equipment was working (Domizio, 2008) and review my slides. Teaching was delivered in accordance with the teaching plan (Appendix 1, p. 293-294), at the beginning of the lecture; I explained the session outline and learning outcomes. Students were encouraged to ask questions at any point throughout the lecture, so I could respond during teaching and I reminded students that the slides were available online. I then proceeded to explain the group agreement, used to protect the options of the students and create a safe environment for group discussions (Rubin & Fernandes, 2013). Following this, an ice breaker was used to encourage meaningful interactions between peers and the instructor (Chlup & Collins, 2010), in addition to adding humour to the teaching environment, which can relieve tension and build rapport (Baid & Lambert, 2010; Nesi, 2012). Use in a fun, meaningful way linked to the topic at hand, to provide a useful learning experience (Baid & Lambert, 2010), the introduction ice breaker exercise called 'who am I', required students to share with the group one fact others in the group may not know about them. I provided them with a couple of minutes to think about what they could share. As the facilitator I took the lead and shared a couple of facts of my own. After the first student spoke, it became apparent that the students were mixed in regards to their start date on the course and so the relationships varied from knowing each other well to not well at all. I therefore altered the exercise slightly giving them the option to speak of something that made them happy that morning, should they not be able to think of something others did not know about them. The exercise got everyone talking and sharing facts that they felt comfortable with. At the end of the exercise, I asked if they learnt something new about each other, there was agreement. I continued to illustrate diversity within the group according to what we all said about ourselves, linking the ice breaker to the context of the session and explaining the importance of not making assumptions and diversity as a whole.

Following the introduction, the lecture was delivered in two parts, where health promotion was the initial focus and diversity was the focus in the second half, although the two topics were integrated throughout. A 20 minute break was used to separate the two parts, but also allowed space for reflection and ensured sustained attention for the duration of the session (Braddeley, 1999). Throughout the lecture I reviewed the students understanding on the given topic, before expanding on the area, referring to credible sources of definition and theory. I incorporated examples provided by the learners or examples from my experience as a trainee health psychologist to ensure the material was presented and pitched at the right level for the learner. At various points during the lecture I would check in with the students to briefly recap on what was learnt so far and provide an opportunity for questions and/or discussion. My ability to respond to questions through the lecture was good, as I spoke clearly for everyone to understand and repeated and rephrased the question when answering so the whole audience could understand, I thanked the person for sharing the question with the group (Domizio, 2008), in addition to providing guidance during discussions. Video material was used to allow the learners to be stimulated using different content and time was

spent reviewing actual health promotion. Discussions following video material were in-depth, with all students contributing respectfully, despite differing opinions, in line with the group agreement.

5.3a   SELECT AND IMPLEMENT APPROPRIATE ASSESSMENT METHODS

The assessment process was already established and comprised of two assessments, weighting 50% each. The first assessment comprised of a 2000 word essay, where students could select one of two titles and would be assessed on their ability to integrate information from the module and to develop an argument. The two titles were:

- Discuss how culture can have an impact on explanations for illness. How may this impact on help seeking behaviours and treatment compliance?
- Social inequalities in the UK and their effects on life chances are increasingly highlighted in the media in recent times. Using an example from current Government policy, suggest ways in which health psychologists might tackle the impact of inequality.

The second assessment was a problem based learning exercise, where the student would work in a small group to create a health promotion leaflet and submit their contributions to the leaflet. The nature of the assessments meant that students would need to include aspects of their learning from this lecture in their assessment.

Students had access to the course handbook and were therefore aware of the assessment criteria. The outcome of the assessment would contribute to the students completing the course. On successful completion of the course, students would be awarded an MSc Health Psychology, accredited by the British Psychological Society. At the end of the lecture when I reviewed the learning outcomes, through discussion with the group, they explained that they felt confident and competent in meeting them. They also highlighted they felt better prepared to complete the second assessment for the course in addition to using learning from the lecture in their first assessment.

5.3b   PRODUCE RECORDS OF PROGRESS AND OUTCOMES

I created a student feedback form to gather information on the lecture overall, but more specifically on my ability to provide a clear understanding of the learning objectives, the PowerPoint presentation and my personal presenting style, as these are key components which can influence a good lecture providing educational value and enjoyment (Domizio, 2008; Goodwin, 2003). I requested students to fill out a feedback form, which asked them to rate these four different questions, on a five point Likert scale from 'poor' to 'excellent'. Ratings for all four questions were either 'very good' or excellent'. The feedback form also had a space for additional comments which was an optional part of the form. The results of the feedback forms were positive and 50% of students also provided positive qualitative comments. The results can be seen in the evaluation report (appendix 3, p. 302-304).

5.4a   EVALUATE THE OUTCOMES OF THE TRAINING PROGRAMME

I evaluated my teaching using multiple sources, gaining feedback from an observer and also self-evaluating in addition to the student feedback, using the method of triangulation (Felder & Brent, 2004). The observer, who was the Director of Studies, was provided an observer form to fill out and results can be seen in the evaluation report (appendix 3, 302-304). The form required the observer to rate me on a five point Likert scale of 1, being unsatisfactory and 5 being exemplary on the appropriateness of objectives to course and student level; achievement of objectives; quality of structure (e.g. session outline, summary, links to other teaching); quality of content (e.g. currency, accuracy, relevance, use of examples, level); appropriateness of teaching/learning methods; level of student participation; quality and use of audio-visual aids; audibility; pace; and vocal expression. The form also had additional space for qualitative comment on general observations, strengths and suggested areas of development. All aspects of the observer form, where rated as 4 or 5 by the observer. The observer also verbally informed me, during the break, of enjoying the lecture and my delivery style. All qualitative comments from the observer were positive and she also provided me with feed forward points including introducing the role of the observer; allowing more time for feedback for larger group tasks and incorporating more images/videos with structured PowerPoint. Although stating these as minor points it was useful to have some suggestions for improvements. I found these solution-focused comments useful in helping me reflect on my teaching and understand practical ways I could improve. Self-observation of my teaching, by reviewing a video recording of the session, served as a valuable experience for identifying strengths and weaknesses.

5.4b   IDENTIFY FACTORS CONTRIBUTING TO THE OUTCOMES

On reflection, positive feedback from students and the observer was due to my ability to deliver a good lecture (Domizio, 2008; Goodwin, 2003), through planning and preparation, connecting with the students, making the lecture interactive and keeping within allocated time. The lecture met the needs of the various learning styles (Honey and Mumford, 1982; Kolb, 1975) using a mix of learning approaches and this had been illustrated in the feedback I received.

5.4c   IDENTIFY IMPROVEMENTS FOR THE FUTURE

Areas of future improvement include allowing more time for feedback following large group tasks, introduce guests or observers to the students and use a questionnaire or quiz at the end of the session, this would allow students to reinforce their learning and as an opportunity for students to reflect on their learning and assess their understanding of the topic and learning objectives (Saunders, 2013). Overall I was pleased with my teaching delivery, both the style and content. The feedback I received from the learners and observer, reflected my abilities to be a strong educator. I found it an enjoyable experience and lecturing is certainly an area I would like to be more involved in.

TEACHING EVALUATION

I have chosen to base my teaching evaluation on the lecture I planned and delivered to MSc Health Psychology students on Diversity and Health Promotion for the module Contexts and Applications of Health Psychology at London Metropolitan University, supporting the case study. I felt I was ideally placed to deliver this session due to my skills and expertise in designing and delivering health promotion for a variety of groups and audiences. More so, I was excited by this opportunity to teach a session for the first time to university students, in particular those studying Health Psychology. It therefore seemed appropriate to evaluate my teaching overall, highlighting areas of strength and improvement from planning to delivering the lecture and evaluating the learning outcomes and teaching style.

5.1a   ASSESS TRAINING NEEDS

I accepted the invitation to deliver the lecture on August 27th 2013 and agreed to deliver the session which took place on the 25th October 2013. I felt this gave me adequate time to plan and design the lecture in line with learning objectives for the students. As the lecture was already established within the course, the module handbook was used to assess the learning needs. On reflection, I feel I could have done more to assess the learning needs of the group beforehand. Sitting down to have a discussion with the course leader may have provided me with more in-depth information about the audience, so I would have been better prepared to teach them. A weakness on the day of delivering the lecture was during the introductions, I found out the group was of mixed ability, some recently embarking on the MSc course, some half way through and some near completion, something not explained in the handbook, but could have been ascertained through a formal meeting with the course leader. Requesting more information from the course leader and better assessing the needs of the group would have enabled me to have a better understanding of the audience. Despite not having this information beforehand, reflecting in practice I successfully adapted the content of the ice breaker task to suit the group and my lack of prior knowledge of the audience did not impact the remainder of the session, but it was a learning experience about the importance of fully assessing the needs of the group and the audience beforehand.

5.2a   DEVELOP THE STRUCTURE AND CONTENT

I had never delivered a lecture before, so I contacted peers on the course for tips on developing the structure and content of a health psychology lecture and also discussed it with experienced university lecturers. I initially reviewed the module handbook and suggested reading material, which provided me with a better understanding of the module overall and left me feeling more confident that I could develop the structure and content of the lecture. Learning outcomes are statements of what should be achieved by the end of the session and so using a design down approach, where learning outcomes encourage ownership of the outcomes by both teacher and students (Harden, 2002), I came up with four learning objectives that the students would need to

gain by the end of the teaching, which served as the structure for the overall lecture and it made it easier to develop the content for the PowerPoint slides (Appendix 2, p. 295-301) and the lecture plan (Appendix 1, p. 293-294). I found it an enjoyable experience developing the structure and content of the lecture.

Although I had 8.5 week's notice to deliver the lecture, the lecture plan (Appendix 1, p. 293-294) was developed with a loose structure and held lightly to allow for flexibility based on the needs of the participants. When planning the session, I had incorporated group interaction, using questions and discussions, video material, an interactive exercise and a group activity, so I was mindful of the complexity, energy and timing needed to execute these efficiently in addition to being clear and consist in my instructions to ensure aims and objectives were met.

5.1c   SELECT APPROPRIATE TRAINING METHODS, APPROACHES AND MATERIALS

Being my first lecture I found it initially quite daunting, with my main anxieties to do with ensuring the lecture meets the various learning styles (Honey and Munford, 1982; Kolb, 1975), I therefore wanted to make sure I selected appropriate teaching methods, approaches and materials. I found myself remembering how I liked to be taught and reflected on the different types of learning style and how a student could potentially move between learning styles throughout the course of a lecture. When delivering the lecture, it was apparent that the students did enjoy the practical points of learning, in addition to the collaborative learning in groups and silent reflection, with all students taking on various learning styles at different points, they were responsive and feedback was positive. Using theory and graphs in the PowerPoint to explain levels of health promotion, the biopsychosocial model of health and health inequalities related to smoking in the UK, plus group exercises and video content, as well as providing time for reflection at various points in the lecture were all methods catering for the different styles of learning and to illustrate learning points in different ways. I also delivered the lecture with the view that the students had not previously seen the slides, in order to meet all students' needs. I was pleased with the variety of teaching methods I had chosen, using a mixture of didactic and experiential approaches. From my observation, but also from students and the observer feedback, students enjoyed the lecture overall, particularly the interactive parts of the lecture, such as the introductory ice breaker, the discussions and small group tasks.

5.2a   FACILITATE LEARNING IN HEALTH PSYCHOLOGY

When facilitating learning for the lecture, the experience I had from teaching and training groups from my professional work enabled me to remain confident and calm when delivering the session. Evaluation forms reported my presentation skills as strong (Appendix 3, p. 302-304), however, although speaking at a good pitch and using the appropriate tone and speed for the audience, initially I felt physically nervous, which I observing on the video of my teaching. My nerves which initially surprised me due to my experience in training, did not have a negative impact on my

delivery, as seen from my video of the lecture and feedback (Appendix 3, p. 302-304) and on reflection, the anxieties derived from the level of doubt of being able to provide the MSc students with the information they require in an interesting way that will be of use for them when preparing for their assessments. I found once the students started providing me with positive reinforcement my nerves subsided and it became an enjoyable experience, which was reflected in the feedback I received from the students and the observers. External noise was identified when observing the video and a point raised by the observer, however it did not impact on my performance, mainly because I was not aware of it, but in the future I need to be more observant of external and environmental factors that could negatively impact on student learning (Shield & Dockrell, 2008).

5.3a   SELECT AND IMPLEMENT APPROPRIATE ASSESSMENT METHODS

The assessment process for the module was consistent with Kolb's four stage learning process (Kolb, 1984) as the lecture provided an opportunity for students to learn through observation and active participation. The assessment required students to think about their learning and how they plan to incorporate it into the assessment process, which provides various opportunities for students to consolidate their learning. On reflection, the learning objectives of the lecture could have been assessed at the end of the lecture using a short quiz, where students could assess their learning achieved in the lecture (Saunders, 2013). Additionally, it would be useful to review the assessment results to see how much learning gain from the lecture was used in the assessment for the module.

5.3b   PRODUCE RECORDS OF PROGRESS AND OUTCOMES

The feedback forms I designed helped me gain an overall understanding of how my teaching and the lecture was perceived. However, for future teaching sessions, the feedback form could also be used as a way of assessing students understanding of the learning objectives and could have requested more detailed information about my teaching style. It also may have been useful to liaise with the course leader to see if they used a particular teaching evaluation and I could have incorporated some of their constructs to help develop the module overall (Felder & Brent, 2004).

5.4a   EVALUATE THE OUTCOMES OF THE TRAINING PROGRAMME

I evaluated my teaching using multiple sources to assess whether the different sources overlapped on their feedback responses, which would affirm the validation of the feedback received (Felder & Brent, 2004). I therefore gained feedback from an observer, in addition to students and I self-evaluated the lecture by reviewing a video of the session, using the method of triangulation (Felder & Brent, 2004). Feedback forms were a quick and simple way to gather information on the students' experience of the lecture, as well as an observer and I was delighted with the unanimous positive feedback. The form enabled students and the observer to report using both qualitative and quantitative methods which permits for more in-depth understanding. On reflection, both student

and observer feedback forms should have used the same constructs, so direct comparisons could have been made across the two groups (Felder & Brent, 2004), (see evaluation report, appendix 3, p. 302-304). Self-observation using the video was also a valuable method to evaluate my teaching style. Despite not doing this before and it feeling uncomfortable as first, I found it useful as a technique to identify strengths including how confident and passionately I presented on the topic, in addition to identifying areas of improvement such as making use of an infrared pointer to highlight specific points on a PowerPoint particularly when showing graphs. Reviewing the video also provided me with a chance to reflect on how I presented in relation to how I remember feeling at the time, since at times I felt overly nervous and I showed it by playing with my ear ring.

5.4b   IDENTIFY FACTORS CONTRIBUTING TO THE OUTCOMES

There were a number of factors contributing to the outcome of the lecture, as detailed in the evaluation report (appendix 3, p. 302-304). The group agreement at the beginning of the session was useful for both students and for me as a teacher to maintain a safe teaching environment and it was adhered to throughout the session, particularly at times when we were talking on areas of a sensitive nature. The group agreement consisted of the following points:

- Share your opinions and ideas
- Respect each other points of view
- Be mindful of giving others the opportunity to speak
- Where possible to try not to speak over others when they are making a contribution
- Only share what you are comfortable with sharing

Learners were able to feel comfortable to share opinions and views throughout the lecture in a safe and comfortable environment (Rubin & Fernandes, 2013), where fellow learners were mindful and respectful of varying points of views. The ice breaker also allowed students to become comfortable with the group and the exercise felt appropriate due to the small nature of the group, as there were eight students present. Throughout the lecture, I allowed plenty of time for discussion, enabling both myself as teacher and the students to take on a multiplicity of roles in the teaching and learning process, enabling students to become owners of their learning (Brady, 2013). As a teacher I found myself considering and evaluating certain points raised by students though discussion, contributing to my own learning, as well as presenting and explaining material to contribute to their learning. I also encouraged the active participation of students throughout the lecture using a variety of interactive formats to again ensure they were co-creators of their learning rather than passive learners (Brady, 2013). I used case study scenarios to explain learning points which improved the ability for learning to be thought of in an applied setting and developed critical thinking skills (Iahad et al, 2013; Popil, 2011). Using personal case studies helped me put the contents of the learning point into context and enabled me to deliver the lecture with passion and enthusiasm, engaging with the audience throughout the duration of the lecture, which improved the quality of the lecture (Domizio, 2008; Goodwin, 2003).

5.4c   IDENTIFY IMPROVEMENTS FOR THE FUTURE

Overall, I felt the teaching session went very well and I have identified areas of improvement that I will use when delivering future lectures. These areas were identified through the use of triangulation (Felder & Brent, 2004) to evaluate the lecture and will contribute to my development as a Health Psychologist. The areas of improvement for teaching MSc Health Psychology students are:

- Meet with the course leader to formally discuss the module and assess learning needs in more detail
- Allow more time for feedback from larger group tasks
- Use a more detailed and comprehensive feedback form to capture students knowledge in relation to the learning objectives as well as space to review of my teaching style
- Be aware of and acknowledge external/environmental noises that could impact on learning

I plan to seek future teaching opportunities with university students during the Professional Doctorate in Health Psychology, which will provide me with a chance to improve on my skills as a lecturer.

<u>**REFLECTIVE COMMENTARY**</u>

This reflective commentary is based on 10 minutes of delivering a lecture on Diversity and Health Promotion to MSc Health Psychology students at London Metropolitan University supporting the case study and teaching evaluation also submitted. The commentary is based on video material of the attached DVD (see appendix 4, p. 305) from 3:00 minutes to 13:00 minutes. This section covers the initial part of the lecture including group agreement and introductions using an interactive exercise called 'Who am I'.

The video was a perfect opportunity to observe myself, particularly as it was the first time I had delivered a lecture to university students in the area of Health Psychology. Although overall I felt the session went well, which was reflected in the written feedback I received from the students and the observer, when observing myself I saw there was some room for improvement, which had not been noted in the feedback. The video captured myself and the PowerPoint slides but unfortunately does not capture the audience, something which I would change when filming a teaching or training session in the future.

From the video I presented very well in regards to my visual presentation, well dressed and standing tall with authority and positioned myself to be seen by the students but not blocking the PowerPoint presentation. My tone and pitch was clear and engaging with the students, I made eye contact and was confident and enthusiastic in what I was talking about, however at the beginning of the 10 minute clip, I noticed signs of nervousness, such as nervous laughing occasionally, using more hand movements than I normally would, and also at times playing with my earring. This was interesting to observe as it is not something I have picked up on before. To improve my performance when teaching and training Ill ensure I wear stud ear rings to avoid the possibility of distraction and I will be more aware of my hand gestures. Unfortunately the video material did not encompass the audience and so I was unable to see if this impacted on the audience, future plans to video record a session for observation should include the audience in the filming. The nervousness highlights that it took approximately 2 minutes into the recording (5 minutes into the lecture) before feeling comfortable with the audience. The nervousness did not impact on my voice and I projected my voice very well, using a clear, steady pitch throughout the duration of the lecture, it did however impact on me delivering instructions and I found myself repeating them a few times which was more down to nerves than not projecting them clearly.

The person that observed the lecture had noted that I did not allow myself to get distracted by the external noises however; when I read this I did not even notice any external noises. When reviewing the video content, I did not allow the external noise to negatively impact on my delivery and spoke clearly and loud enough for the students to hear me, and although I was unable to see students non-verbal reaction to the external noise, they remained fully engaged for the duration of the lecture, participating in group discussions and smaller group tasks, which can be heard on the video recording. Learning from this, I must consider my surroundings more, in case external factors

are making an impact on the learners engaging, despite them not having an impact on me delivering material as a teacher.

The nervousness subsided once I started with the ice breaker and the audience had positively reinforced what I was doing; you can clearly see a difference in my body language, smiling more appropriately rather than nerves, calming down with hand movements and no more being distracted with my ear ring. My voice and body language was professional but friendly and from the discussions that took place I enabled the group to feel safe and contribute the lecture. This was also supported by the inclusion of the group agreement.

During the ice breaker, I listened attentively, using active listening skills, eye contact and smiling, in addition to providing verbal positively reinforcement to each student following the contributions each student made. There was lots of appropriate laughter during the ice breaker, which was a sign of enjoyment from the students and that they were feeling more comfortable, as was I. I do feel it may have been helpful to have a slide on the ice breaker, for those students who arrived late or as a reminder as to what they were to contribute, but overall the ice breaker was delivered clearly and effectively. I clearly and concisely explained at the end of the ice breaker how it related to the overall aim of the session and that sharing examples of differences within the group through the ice breaker exercise illustrated the diversity within the group. This was used as an introduction in the topic diversity and health promotion.

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APPENDICES

APPENDIX 1

LECTURE PLAN: DIVERSITY AND HEALTH PROMOTION (2.5 HOURS)

Audience:	Size of group:
MSc Health Psychology	8-10

Learning objectives:
By the end of the session, students will be able to:
• Define health promotion and explain the levels of preventions
• Understand various factors to consider when tailoring a health promotion intervention
• Understand equality and diversity in the context of health promotion
• Describe issues faced by marginalised and minority groups and challenges within healthcare

Learning outcome	Time	Activity
Introduction, key objectives and group agreement	10 minutes	Sides 1 - 5
Understand and defining health promotion	10 minutes	Slides 6 - 10
	10 minutes	Discussion: health promotion messaging
The focus of health promotion	20 minutes	Slides 11 - 18
Tailoring a health promotion intervention	5 minutes	Slides 19 - 21
Break	20 minutes	
What is diversity?	5 minutes	Group discussion: Define diversity (slide 22 - 23)
	5 minutes	Slides 24 - 27
	10 minutes	Group discussion: Health inequalities (slide 28)
Diversity, health and health promotion	15 minutes	Slides 29 - 35
Diverse views of health	5 minutes	Slides 36 - 39 (scenarios)
Task	20 minutes	Slide 40
Review learning objectives and evaluation	15 minutes	Slide 41

Video links:

1st video: https://www.youtube.com/watch?v=-6tl75UqtLg

2nd video: https://www.youtube.com/watch?v=KAPNZzAXXlQ

Suggestive reading:

1. Bunton, R., Nettleton, S. & Burrows, R. (1995). *The Sociology of Health Promotion: Critical Analyses of Consumption, Lifestyle and Risk*. London: Routledge.

2. Chiu, L.F. (2008). Engaging communities in health intervention research/practice. Critical *Public Health, 18*(2), 151.159.

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APPENDIX 2: LECTURE SLIDES

DIVERSITY & HEALTH PROMOTION

25th October 2013

PYP013
Context and Applications of Health Psychology

Tilean Clarke
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SESSION OUTLINE

1. **Learning objectives**

2. **Group agreement**

3. **Health promotion**
   - Understanding and defining health promotion
   - The focus of health promotion
   - Tailoring a health promotion intervention

SESSION OUTLINE

4. **Diversity**
   - What is diversity?
   - Diversity, health and health promotion
   - Diverse views of health

5. **Review learning outcomes**

LEARNING OBJECTIVES

By the end of the session, students will be able to:

- Define health promotion and explain the levels of preventions

- Understand various factors to consider when tailoring a health promotion intervention

- Understand equality and diversity in the context of health promotion

- Describe issues faced by marginalised and minority groups and challenges within healthcare

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GROUP AGREEMENT

- Share your opinions and ideas

- Respect each other points of view

- Be mindful of giving others the opportunity to speak

- Where possible to try not to speak over others when they are making a contribution

- Only share what you are comfortable with sharing

UNDERSTANDING AND DEFINING HEALTH PROMOTION

DEFINITION OF HEALTH PROMOTION

Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being.

World Health Organization

CORE ELEMENTS OF HEALTH PROMOTION

○ **Focus on policy:**

Health promoters advocate and mediate on behalf of populations for policies which improve living conditions and affect the determinants of health.

○ **Focus on supportive environments:**

Health promoters aim to create health-promoting environments.

CORE ELEMENTS OF HEALTH PROMOTION

○ **Focus on community engagement:**

Health Promotion engages with communities, and values the assets they bring to understanding the causes of health problems and taking action to tackle them. Successful health promotion programmes actively involve communities, and try to enable them to take control over their health by developing stronger networks and long-lasting initiatives that are self-supporting.
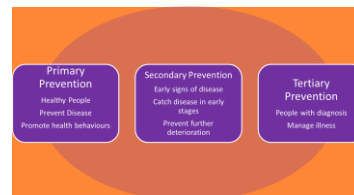
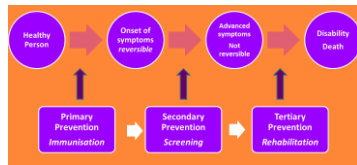**NICE public health guidance**

HEALTH PROMOTION MESSAGES AND MATERIALS

What type of health promotion have you found useful?

THE FOCUS OF HEALTH PROMOTION

LEVELS OF PREVENTION

Primary Prevention
Healthy People
Prevent Disease
Promote health behaviours

Secondary Prevention
Early signs of disease
Catch disease in early stages
Prevent further deterioration

Tertiary Prevention
People with diagnosis
Manage illness

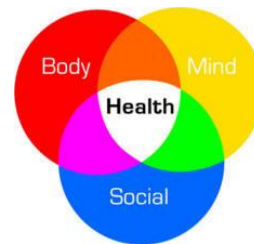## LEVELS OF PREVENTION AND HEALTH PROMOTION

PUBLIC HEALTH ENGLAND 2013/2014 PRIORITIES

o Helping people to live longer and more healthy lives by reducing preventable deaths and the burden of ill health associated with smoking, high blood pressure, obesity, poor diet, poor mental health, insufficient exercise, and alcohol

o Reducing the burden of disease and disability in life by focusing on preventing and recovering from the conditions with the greatest impact, including dementia, anxiety, depression and drug dependency

o Protecting the country from infectious diseases and environmental hazards, including the growing problem of infections that resist treatment with antibiotics

PUBLIC HEALTH ENGLAND 2013/2014 PRIORITIES

o Supporting families to give children and young people the best start in life, through working with health visiting and school nursing, family nurse partnerships and the Troubled Families programme

o Improving health in the workplace by encouraging employers to support their staff, and those moving into and out of the workforce, to lead healthier lives

o Promoting the development of place-based public health systems

BIOPSYCHOSOCIAL MODEL OF HEALTH

HEALTH BEHAVIOUR CHANGE MODELS AND HEALTH PROMOTION

Promote health behaviours to individuals. This can include:

- Using medical services e.g. visiting the GP, screening for cancer etc.
- Adhering to medical regimes i.e. taking medication for high blood pressure.
- Self-directed behaviours such as diet and exercise.

Models:

o Motivational Models; Enaction Models; Multi-stage Models

FACTORS THAT CAN IMPACT HEALTH BEHAVIOUR CHANGE

o Demographics variables

o Social factors

o Emotional factors

o Access to services

o Personality

o Cognitive factors

TAILORING A HEALTH PROMOTION INTERVENTION

TAILORING A HEALTH PROMOTION INTERVENTION

Planning:
- Gather knowledge and know your audience!
- How will you engage with your audience?

Implementation:
- Location and timing

- Press, TV, print, internet on both computers and hand held devices

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TAILORING A HEALTH PROMOTION INTERVENTION

- **Health educators**
  - Communicating with other health professionals, MDT
  - Primary Care Partnership
  - Community/Lay health educators

WHAT IS DIVERSITY?

How would you define diversity?

When implementing prevention programs, it is important to consider culture and diversity, such as socioeconomic status, sexuality, spirituality, ethnicity, and other aspects and understand the community served (Hogan et. al, 2002).

Dictionary definition:
- **1.** the state or quality of being different or varied
- **2.** a point of difference

Diversity implies a wide range of conditions and characteristics. Diversity encompasses visible and non-visible individual differences. Diversity is about respecting individual differences, and people's differences can be many and varied.
It is not about treating everyone exactly the same, but about treating people as individuals and accounting for inequalities and disadvantages.

It encompasses acceptance and respect, understanding that each individual is unique, and recognising our individual differences.

PROTECTED CHARACTERISTICS

- Health Equality Act (2010)
  - Age
  - Disability
  - Gender reassignment
  - Marriage and civil partnership
  - Pregnancy and maternity
  - Race
  - Religion and belief
  - Sex
  - Sexual orientation

HEALTH SECRETARY JEREMY HUNT SAID:

"Everyone should have the same opportunity to lead a healthy life; no matter where they live or who they are which is why we must continue to work to narrow the gap in health inequalities.

How can we achieve this?
Write down your ideas.

DIVERSITY, HEALTH AND HEALTH PROMOTION

ETHNICITY AND HEALTH PROMOTION

- Caribbean and Pakistani babies born in the UK are more than twice as likely to die before the age of one as White British or Bangladeshi babies. Explanations complex, involving the interplay of deprivation, physiological, behavioural and cultural factors.

- Lower uptake of cancer screening among BME groups.
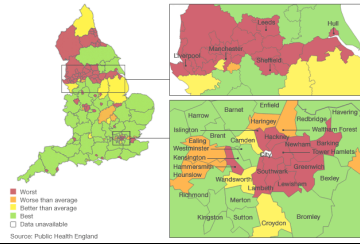
ETHNICITY AND HEALTH PROMOTION

- South Asian women have been consistently identified as having a lower breast screening uptake rate than other groups.

- It has been found that Indian, Pakistani, Bangladeshi and Chinese women are all less likely to meet the physical activity guidelines than White women after controlling for age, migration, educational qualifications, economic activity, household income and area-level deprivation.

SEXUALITY AND HEALTH PROMOTION

- LGB have higher incidence of mental health problems Discrimination → social stress and prejudice → poorer mental health

- Research suggests that lesbians want to disclose their sexual orientation to their GP, but are reluctant to do so because they think that they might be discriminated against → inappropriate delivery of services.

- Lesbians been found to not screen for cervical cancer at recommended rates. Non routine screeners perceived fewer benefits, more barriers, and more discrimination and were less knowledgeable about screening guidelines than routine screeners (Kathleen et al., 2010).
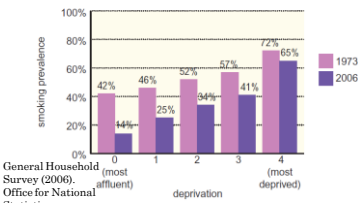
HEALTH INEQUALITIES - LOCATION

Overall premature deaths

Worst
Worse than average
Better than average
Best
Data unavailable

Source: Public Health England

HEALTH AND WEALTH

Prevalence of cigarette smoking 1973 and 2006 (General Household Survey)

General Household Survey (2006). Office for National Statistics

HEALTH INEQUALITIES - OCCUPATION

Smoking prevalence in adults in England 1998 - 2006 by socio-economic group (General Household Survey)

General Household Survey (2006). Office for National Statistics

DIVERSE VIEWS OF HEALTH

○ "Mr. Smith in room 222 is the ideal patient. He never has a single complaint."

○ "Mrs. Cohen in room 223 is a real complainer. She is constantly asking for pain medication and putting on her light."

○ "Mr. Chen in room 225 says nothing."

TASK – 20 MINUTES

Working in small groups:

○ Choose a health behaviour or health related condition
○ Choose a targeted group
○ Considering diversity, develop an intervention specifically for this targeted group

○ Think about how you would engage with this audience specifically and tailor your intervention accordingly.

REVIEW LEARNING OBJECTIVES

○ Define health promotion and explain the levels of preventions

○ Understand various factors to consider when tailoring a health promotion intervention

○ Understand equality and diversity in the context of health promotion

○ Describe issues faced by marginalised and minority groups and challenges within healthcare

APPENDIX 3: STUDENT AND OBSERVER FEEDBACK

STUDENT FEEDBACK

	Excellent	**Very Good**	**Good**	**Fair**	**Poor**
Your overall rating of this lecture	4 (50%)	4 (50%)	0	0	0
Provided a clear understanding of subject and learning objectives	3 (37.5)	5 (62.5)	0	0	0
PowerPoint presentation style, clarity and content	2 (25%)	6 (75%)	0	0	0
Presentation delivery style, including tone and pitch of presenter	7 (87.5%)	1 (12.5%)	0	0	0

Qualitative comments

50% of students (n = 8) made comments on their feedback form, of which all made comment on the interactive nature of the session being enjoyable.

- Liked the group discussions. Very good tone and delivery especially in a Friday afternoon. Kept me engaged.
- Very friendly and approachable. Good interactive session.
- Very well presented and interactive. Very relevant to current topic in the course and later coursework. Overall very satisfied.
- Really interesting lecture, particularly enjoyed the activities. Thanks!

No negative comments were made.

OBSERVER FEEDBACK

The observer rated me on a scale of 1 - 5, with 1 related to unsatisfactory and 5 related to exemplary. The observer rating is as follows:

Please rate session overall	(Please circle as appropriate: 1 = unsatisfactory; 5 = exemplary)	1	2	3	4	5
	Appropriateness of objectives to course/student level				★	
	Achievement of objectives				★	
	Quality of structure (e.g. session outline, summary, links to other teaching)				★	
	Quality of content (e.g. currency, accuracy, relevance, use of -examples, level)				★	
	Appropriateness of teaching/learning methods				★	
	Level of student participation				★	
	Quality and use of audio-visual aids				★	
	Audibility					★
	Pace				★	
	Vocal Expression				★	

Qualitative comments include:

General observations:

- Everything set up and ready to go well in time for start of the session
- Group agreement of respect and sharing views
- Professional but relaxed and welcoming manner
- Followed structure specified in outline
- Very applied focus at the beginning leading into what psychological theory and research has to offer in this context
- Diversity was in second part of the session, but was flagged in first part of the session, so integrated
- There was a lot of noise in the lecture room next door, but Tilean did very well in not allowing it to put her off and remained professional throughout

Strengths:

- Nice introduction of self to give context to the session
- Clear slides - not over crowded
- Interactive and good first exercise to engage audience. Excellent relationship with audience.
- Good links into diversity issues in tailoring the intervention
- Lots of good examples from own work experience/practice
- Some good points about methodological issues embedded, e.g. measuring success of health campaigns

Suggested areas of development:

(Observer noted 'all minor points though')

- Given the importance of group discussion and small size of group, maybe should have introduced role of the observer so students were aware of why they were there
- Second exercise (designing a health intervention) was perhaps a bit to large for time available and/or needed more time and feedback
- Maybe include more images/videos with structured PowerPoint

APPENDIX 4: DVD OF LECTURE

SECTION D

PUBLICATIONS RELATING TO THIS THESIS PORTFOLIO

PUBLICATIONS

Clarke, T., Galaal, K., Bryant, A. & Naik, R. (2014). Evaluation of follow-up strategies for patients with epithelial ovarian cancer following completion of primary treatment. *Cochrane Database of Systematic Reviews, 9.*

Clarke, T. & Lusher, J. (2015). *Awareness and contact routes to electronic cigarette in UK adolescents.* Poster session presented at: 16th World Conference on Health or Tobacco, 2015 March 17-21, Abu Dhabi, UAE

Clarke, T. & Lusher, J. (2015b). The e-cigarette: A new gateway to addiction? Oral presentation presented at: Smoking Science Summit, 21 May 2015, London, UK.

Clarke, T. & Lusher, J. (2015). Transitioning patients with inflammatory bowel disease (IBD) from adolescent to adult services: a systematic review. *Frontline Gastroenterology* [In press].

CURRENTLY PREPARING FOR PUBLICATION:

Clarke, T. & Lusher, J. (2015). The impact of flavoured e-cigarettes on UK adolescents. *Journal of Child and Adolescent Substance Abuse.*

Clarke, T. & Lusher, J. (2015). Willingness to try and susceptibility to e-cigarette use in UK adolescents. *Psychology of Addictive Behaviour.*

Clarke, T. & Fitzgerald, S. (2015). Health and wellbeing training needs of line managers in the rail industry. *Occupational Safety & Health Journal.*