

# Mental health clinicians' motivation and awareness of key considerations as predictors of online therapy uses and applications

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## Abstract

Despite their well-documented effectiveness, online psychological interventions seem to be underperforming with the latest evidence revealing high client dropout rates. The literature indicates that online client engagement tends to improve through a sound online therapeutic alliance and interventions that are credible, reliable and of high-quality. There is little research, however, as to the specific clinician-related factors that might predict the adoption of online therapy practices and interventions that map onto the above online therapy qualities. To address this gap in the literature, the current thesis assesses statistically, whether online practicing clinicians' awareness of key considerations in online therapy (AKCOT) and motivations are linked to the adoption of associated (outcome) online therapy uses and applications (OOTUA). It was hypothesised that clinicians' AKCOT and motivations would predict OOTUA. Two studies were employed to this effect.

Study one ( $n= 19$ , UK-based participants) developed a series of purpose-built scales measuring AKCOT and OOTUA. It also evaluated pre-existing motivational scales such as intrinsic, extrinsic motivation, perceived competence (in forming an online therapeutic alliance) and attributional style towards mental health stigma, ascertaining their usefulness in the context of the current project.

Study two adopted a multiple regression analysis design where a total of 174 (138 UK-based and 36 America-based) online practicing clinicians completed an online survey. The factors of AKCOT were measured by the purpose-built scales developed in study one, assessing awareness of key consideration in online disinhibition theory, online therapy ethical considerations and training requirements. The corresponding OOTUA factors were measured on self-report scales capturing associated (to the AKCOT) online therapy applications. The motivational constructs were measured using an intrinsic motivation inventory, general causality-controlled orientation and perceived competence scales.

The main findings showed that the AKCOT predictors consistently accounted for approximately 30% and the motivation predictors for approximately 10-20% of the variance in OOTUA. Discussion of the findings considers theoretical and practical implications at the professional regulatory and training level. It is proposed that professional psychological bodies update their regulations around online therapy, and counselling and psychotherapy training courses ensure that trainees are familiarised with online therapy theoretical and practical key considerations as part of their core qualifying training.

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To those who went through life's edge silently,  
without a tear's streak on their cheek

Hainides (*Greek*: Χαϊνηδες)

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## 1. Chapter one. Introduction

There is a plethora of terms describing the provision of psychological interventions in cyberspace with some examples being online therapy, web-based counselling, telehealth, e-mental health or cyber-therapy (Mallen, Jenkins, Vogel & Day, 2011; Perle, 2011; Richards & Richardson, 2012). Based on Richards and Vigano's (2012) definition online therapy refers to [...] *the delivery of therapeutic interventions in cyberspace where the communication between a trained professional counsellor and client(s) is facilitated using computer-mediated communication (CMC) technologies, provided as a stand-alone service or as an adjunct to other therapeutic interventions.* From a therapist's perspective, this definition implies a specialist area of intervention which is grounded in a diverse range of modes of CMC such as email, chatrooms, instant messaging, blogging, self-help websites or video-conferencing (e.g. Erbe, Eichert, Riper & Ebert, 2017; Hadjistavropoulos, Schneider, Klassen, Dear & Titov, 2018; Titov et al., 2018). On this basis, the term *online therapy* is adopted, in the current thesis, as an umbrella term incorporating any mental health-related psychological interventions delivered via CMC. The terms *online therapist* or *online (practicing) clinician* are used interchangeably referring to (registered) mental health clinicians (such as psychologists, therapists and mental health nurses) who offer psychological interventions in cyberspace across various settings.

Online therapies have been associated with a series of unique benefits afforded in cyberspace such as improved accessibility to care, flexibility of communication, increased outreach, cost-effective and efficient methods of intervention (Anderson, 2016; Berry, Bucci & Lobban, 2017; Donker et al., 2015; Topooco et al., 2017). Cyberspace-based communication opens new possibilities for disinhibited and stigma-free environments, which can empower people who otherwise would not seek psychological support (Richards et al.,



2018; Suler, 2004). Additionally, online interventions have been consistently reported to produce moderate effect sizes, and in many cases as good outcomes as face-to-face (FTF) interventions, across mental health conditions, clinical settings and populations (Anderson et al., 2014; Barak, Hen, Boniel-Nissim & Shapira, 2008; Olthuis, Watt, Bailey, Hayden & Stewart, 2016; Richards & Richardson, 2012; Watson et al., 2017). Due to their benefits and evidence-based effectiveness, online interventions seem to hold a key potential complementing (Wentzel, van der Vaart, Bohlmeijer, & van Gemert-Pijnen, 2016) and expanding the possibilities for outreach and accessibility in the overall delivery of traditional mental health care (Anthony, 2015; Van der Vaart et al., 2014).

A large proportion of that (effectiveness) literature is based on computerised protocols of intervention, such as Internet-based cognitive behavioural therapy (iCBT). This is a configuration of online intervention where the therapist's input is typically constrained within a firm therapeutic structure and has a technical, supportive rather than therapeutic role. The client interacts primarily with the computerised program of treatment with the therapist being available, on the side, to guide him or her through the process and tasks of the computerised treatment plan (Andersson & Hedman, 2013). This means that the degree of therapeutic movement (in iCBT terms) depends primarily on the client's interaction with the iCBT software, and not on the therapist's therapeutic input. As a result, the area of iCBT currently accepts that clinicians who work in this context need less training and therapeutic skills, than therapies which rely on the therapeutic alliance (e.g. Andersson & Hedman, 2013; Titov et al., 2018).

Consequently, the role of the therapeutic alliance (the working relationship or bond between therapist and the client) is not central in iCBT terms. As such, it has been found not to predict client engagement and therapeutic outcomes, as heavily as it does in traditional face-to-face (FtF) therapy (Andersson & Hedman, 2013), or other configurations of online

intervention where the therapist has the primary therapeutic role (Anthony & Nagel, 2010). When disseminating an intervention in routine care and realistic clinical settings, however, treatment effects are not only defined in terms of symptom improvement but also in terms of client engagement, client adherence, and the therapeutic alliance or any other mediating and moderating factor influencing effectiveness (Andersson & Hedman, 2013; Berger, 2017). In other words, the true effectiveness of an intervention can be compromised due to factors such as clients disengaging prematurely and not adhering to the therapeutic tasks included in their treatment plan.

In this respect, and contrary to their well-documented effectiveness, it has become apparent that computerised protocol interventions (such as iCBT) tend to under-perform suffering from high dropout rates in real-life routine care (Du, Quayle & Macleod, 2013; Edmonds, Hadjistavropoulos, Schneider, Dear & Titov, 2018; Richards et al., 2018; So et al., 2013; van der Vaart et al., 2014; Wentzel et al., 2016). Thus, a key question that needs to be asked is what makes clients more likely to disengage from therapies that prioritise the computer-human connection over the human (therapist)-to-human connection online. Comparative research between therapist-assisted and non-assisted iCBT (the latter involves no input by the therapist whatsoever) demonstrated that the therapist's input associated specifically with feedback giving, support, encouragement, alliance bolstering, and empathetic utterances precipitated increased client engagement and better treatment completion rates (e.g. Baumeister, Reichler, Munzinger & Lin, 2014; Berger, 2017; Hadjistavropoulos et al., 2018). As such, the soaring client dropouts, in real-life clinical applications of computerised protocol approaches, could be attributed to some degree to the lack of focus on the quality of the online therapeutic alliance and the limited therapist expert input.

Existing research that investigates, in more depth, the nature and origins of online client dropouts (inside and outside iCBT) reveals that clients' perceptions of a sound online therapeutic alliance and treatment credibility tend to predict dropouts with notable consistency, especially at the early stages of therapy (e.g. Alfonsson, Olsson & Hursti, 2016; Donkin & Glozier, 2012; Wentzel et al., 2016). These findings imply that among the key preferences of the online client might be the connection with another human being online, rather than the simple interaction with digital software. From a clinician's perspective, these findings suggest that certain treatment-specific and clinician-related factors (such as those mentioned in the previous paragraph) must be at play, fostering, actively, the development of a credible, online therapeutic alliance.

While this point of critique could inform future developments in iCBT, it is especially important for online therapists who work outside the domain of computerised protocol interventions. In that context, the quality of the therapeutic alliance and the clinician's therapeutic expert input (not the software's) would play a critical role in therapy outcomes and client engagement. Although the aforementioned body of literature on online client engagement and dropout predictors is insightful, it remains limited as it does not consider the specific clinician-related factors and the degree to which those need to be present facilitating a credible therapeutic alliance online.

To this effect, the current thesis proposes that additional research is needed to understand which clinician-related factors map onto the online client's expectations for a credible and strong therapeutic alliance online. This type of exploration would naturally be guided by the CMC principles which govern therapeutic and interpersonal communication in cyberspace and apply in the overall provision of clinician-led online therapeutic interventions. Here lies the focal point and the foundation of the intended unique contribution to the literature by the current thesis. This could contribute to a better understanding of the

dimensions that govern the real-life applications of online therapy and its effectiveness in terms of therapeutic alliance and client engagement (both inside and outside the iCBT context). Given the lack of research in this area, however, it is necessary that the current thesis reviews and synthesises its theoretical framework based on various bodies of literature to arrive at its main research orientation and objectives. There are two main strands of literature that could be drawn upon in this pursuit.

The first strand is located in existing therapeutic alliance literature, which can provide an insight as to the clinician-related factors (such as knowledge, skills, behaviours and practices) and clinician-led behaviours that are known to facilitate a strong therapeutic alliance online as well as overall credibility of online clinical practice. (e.g. Anthony & Nagel, 2010; Weitz, 2014). The second strand is located in existing literature that investigates the process of uptake and adoption of online interventions in routine care by clinicians (e.g. Feijt, de Kort, Bongers & IJsselsteijn, 2018). Based on this strand of literature factors that might drive clinicians adopting (or endorsing) the above practices (or interventions) online can be discerned, with an aim to be assessed as to their predictive ability in the current research project.

The current thesis, therefore, aims to identify and explore potential clinician-related determinants in the delivery of online therapy, which (based on existing literature) are expected to map onto the typical online client's expectations of therapeutic alliance and treatment credibility. The results of this exploration would lead to an added insight as to how the provision of online therapy could be improved in the pursuit of high-quality, more engaging, accessible and reliable online services that could meet the increasing demand thereof.

## **2. Chapter two. Literature review**

### **2.1. Online therapeutic alliance and client engagement**

The next paragraphs review the first strand of literature, as described above. Traditional (offline) counselling and psychotherapy research has investigated client engagement for several decades showing that the therapeutic alliance is a central and consistent predictor of client engagement and therapy outcomes (Cooper & Norcross, 2016; Duncan & Miller, 2006; Fluckiger, Del Re, Wampold, Symonds, & Horvath, 2012; Wampold, 2001; 2015). The notion of therapeutic alliance typically implies a collaborative process between client and the therapist, where the first's expectations and needs of therapy are negotiated and addressed. Most recent research in this area has concluded that the most critical determinant of a good therapeutic alliance is the therapist, and specifically their level of skill and therapeutic relational abilities (Fluckiger et al., 2012; Wampold, 2001; 2015). Such skills are typically underpinned by communicational and relational qualities, such as the ability to express one's empathy and reconcile raptures through a compassionate discussion. In terms of the online therapeutic alliance, it is indicated that the therapist would need to consider their client's expectations and use their therapeutic, online clinical, interpersonal and communicational skills to aid the delivery of such interventions that could meet the client's expectations enhancing, as such, the therapeutic alliance.

In a recent qualitative study, Berry, Lobban and Bucci (2019) investigated 18 clients' expectations and preferences as to online interventions for the self-management of severe mental health issues. The key themes emerging from this study revolved around the increased flexibility of communication, and accessibility to mental health support through cyberspace. In addition, perceived empowerment, increased opportunities for self-reflection and a sense of control over one's online treatment plan were among the clients' preferences and exceptions of online interventions. In another study, Kauer, Mangan and

Sanci, (2014) found that young people who used online therapy valued the possibility of having control over the modes of intervention employed in their treatment plan and the flexibility of the available support (see also Van der Vaart et al., 2014). The same participants also reported finding text-based communication with their therapist easy to access and helpful. These online client expectations seem to be broadly associated with the central benefits of the cyberspace which include flexible, accessible, disinhibiting text-based and diversified interpersonal communication online (Dunn, 2014). From an online therapist's perspective, this body of research points to the key considerations that need to be taken into account when seeking to establish a strong therapeutic connection and alliance with the online client (e.g. Berger, 2017).

The provision of online interventions that map on the communicational benefits of cyberspace (and clients' online expectations) is proposed to encourage clients' perceptions of credibility of treatment, which have also been found to predict therapy dropouts (e.g. Alfonsson et al., 2016; Donkin & Glozier, 2012; Wentzel et al., 2016). Perceived credibility, in this sense, is associated with the client's belief that the chosen intervention(s) could be effective in meeting his or her needs and facilitating positive therapy outcomes (e.g. Alfonsson et al., 2016; Wentzel et al., 2016). It is also associated with a sense of trust in the online therapeutic environment. This sense of trust is key in the development of a sound therapeutic alliance as it implies a safe, contained, professional and reliable space for therapy to take place in. In practical terms and in line with Weitz (2014), it would be underpinned by a transparent process of contracting (takes place at the start of every plan) as well as issues of online security and other ethical considerations associated with the viability of online therapy.

Available literature shows, however, that online practicing clinicians have, historically, shown difficulty matching the online client's expectations as outlined above.

Firstly, Mallen et al.'s (2005) work drew attention to this issue, which has been repeatedly highlighted since. Gun et al. (2011) reported that mental health professionals expressed a preference towards online single-mode interventions and notably low positive attitudes toward the diverse range of online interventions and modes of communication (see also Berger, 2017). Van der Vaart et al. (2014) looked more closely into client and therapist perceptions on blending online with FtF interventions. These researchers found that therapists were unclear as to how online interventions could be blended and used to support an offline, ongoing treatment plan. These findings imply that if a therapist cannot see the usefulness of diversified and flexible online interventions, which as has been seen would map onto many clients' expectations, it will be likely that they would hesitate to adopt those in routine practice. This hesitation would render online clinicians unable to meet the online client's expectations effectively (Weitz, 2014); therefore, the quality of the online therapeutic alliance would be poor and client engagement rates would drop.

This line of thought brings a new dimension of understanding of online client engagement from a therapist's perspective. This implies that it is not enough that the therapist is simply willing, or intends to, establish an online therapeutic alliance with their client. They would need to have a set of specialist skills and relevant expertise (e.g. Anthony, 2015) that would enable them to turn their intentions into actual effective practice (e.g. Berry et al., 2019; Kauer et al., 2014). This proposition contradicts that of Andersson and Hedman, (2013) who stated that the need for specialist trained clinicians in iCBT is minimal. After highlighting the importance of the online therapeutic alliance, the current thesis recognises that clinicians would need to have certain skills and online technical knowledge to ensure that the online client's expectations and needs are adequately addressed. This position aligns with leading online therapists, who tend to operate outside computerised protocol therapies, and clearly stress the necessity of specialist training as a crucial determinant of effective and safe

online therapy (Anthony, 2015; Waugh, 2017; Weitz, 2014). As such, it is accepted that specialist training, in online therapy, could help online practicing clinicians move away from their dependency on FtF communicational principles and adopt online practices that are in line with the nature and benefits of CMC.

The Association for Counselling and Therapy Online (ACTO), which is the main body dedicated to promoting high-quality, ethical and safe online therapy in the United Kingdom (UK), highlights the criticality of specialist training in their code of professional guidelines. Furthermore, the British Association for Counselling and Psychotherapy (BACP, 2015) and the British Psychological Society (BPS, 2018) have both updated their predominant code of professional conduct recommending that their members seek specialist training before venturing to offer their services online. These guidelines, however, are not bound or enforced by universally accepted regulations or policies, so there is nothing to prevent therapists from ignoring them (Anthony et al., 2014).

Without these regulations being universally and consistently enforced, clinicians have only their moral compass to guide their online practice (e.g. Anthony et al., 2014; Weitz, 2014b), and while this can be trustworthy to some extent, it is not always reliable (as the next paragraphs will show). This might be a key reason as to why the provision of online therapy uses and applications is characterised by increased inconsistency (e.g. Weitz, 2014), which according to the current thesis encourages the adoption of ineffective (as to the therapeutic alliance) and non-credible interventions by online practicing clinicians.

## **2.2. Adoption of online interventions by clinicians**

Thus far, this chapter has defined what the notions of online therapeutic alliance and treatment credibility might entail from a clinician's perspective. It was indicated that online therapy practices which map onto the key benefits of cyberspace, such as diverse,



flexible, disinhibiting and accessible communication, would be likely to promote a better online therapeutic alliance and facilitate better therapy outcomes (e.g. Alfonsson et al., 2016; Hadjistavropoulos et al., 2018; Wentzel et al., 2016; van der Vaart et al., 2014). Before reviewing the theoretical and practical premises of these practices in more depth, it is necessary that this chapter proceeds now to review the available literature on mental health clinicians' process of adopting any online interventions in routine practice. By reviewing this area of literature, the current thesis would discern potential clinician-related factors that could predict the adoption of online therapy-specific practices as those have been outlined above.

In a recent systematic review, Vis et al. (2018) identified 25 studies that explored clinician-related factors that are associated with the adoption or implementation of various online interventions in routine practice. The majority of those studies utilised qualitative or mixed-methods research frameworks (e.g. Feijt et al., 2018). This can be attributed to the hard-to-reach nature of the population of online practicing clinicians (e.g. Hennemann et al., 2017; IJzerman, 2017). Only one purely quantitative observational study was reported to exist that investigated clinicians' uptake of online interventions. Vis et al. (2018) do not provide enough details as to that study's sample or specific interest, so it could not be located or evaluated. It is noted, however, that at the time of writing, no study of this interest was identified to have recruited more than 30 online practicing clinicians.

Vis et al. (2018) indicated that, clinicians' awareness of the usefulness of online interventions and their therapeutic skills, in establishing a good online therapeutic alliance, were the most consistent factors underpinning their decision to adopt and implement online interventions in routine practice (see also van der Vaart et al., 2014; Wentzel et al., 2016). In this respect, Anthony (2015) also suggests that online therapeutic practice requires that therapists understand the underpinnings of human behaviour in cyberspace, which will enable them to adapt their FtF therapeutic skills online. This process involves the essential task of

clinicians' familiarisation with and training in the 'cyberculture' and premises that govern online communication for therapeutic purposes (see also Anthony & Nagel, 2010).

Du et al. (2013) investigated iCBT, UK-based clinicians' perceptions of the use of online communication and reported that they tend to remain attached to what is familiar to them, often resorting to simply transferring offline practices online (see also Andersson & Hedman, 2013). This is because they seek to remain attached to their natural expertise of FtF communication not venturing into the unknown and different (Du et al., 2013). This way of working online is primarily attributed to an insufficient understanding of the key considerations and therapeutic applications of CMC, which is rooted in the absence of corresponding specialist training. Du et al.'s (2013) work is among the few that highlighted the need for specialist training, even within the iCBT context. However, even outside iCBT, it appears that a proportion of the online practicing clinicians might be working without the necessary training, risking as such their clients' safety and the credibility of online practices. A recent news' post in a reputable online paper read: "Mentally ill people are being 'exploited' by unaccredited counsellors online" (Bulman, 2018).

Perle et al. (2013) reported that only 21% of clinical psychologists, out of a sample of 717 United States-based participants, had sufficient training in online interventions despite the fact that 75% recognised its practical importance. These clinicians were found to be concerned as to the safety and effectiveness of online therapy, which made them hesitate to adopt online interventions in routine practice. These concerns, however, are deemed unfounded when compared to the evidence-based literature that supports the effectiveness of online interventions (e.g. Anderson et al., 2014; Barak et al., 2008; Berger, 2017). As such, for Perle et al. (2013), this contradictory finding indicates that their lack of specialist training was associated with limited awareness, ill-informed beliefs and practical misconceptions, as to what online therapy is considered to entail. As such, their tendency to hesitate or decide

not to adopt certain online interventions in routine practice may be rooted in their lack of awareness as to the key aspects and potential effectiveness of online therapies.

As expected, this hesitation and lack of awareness would have a negative effect on the overall quality of the provision of online therapies, which could remain limited within the FtF-led framework of communication. On the other hand, it could impact online practicing clinicians' ability to facilitate client engagement and therapy outcomes through diverse and flexible (therapeutic) communication online (Anthony, Goss & Nagel, 2014). As such, the factor of awareness (or familiarity) of key considerations in online therapy (AKCOT) would be instrumental in predicting associated uses and applications. On this basis, AKCOT is identified as the primary clinician-related predictor, which the current thesis will seek to assess against the uptake of corresponding uses and applications of online therapy.

From a behavioural intention's perspective, Hennemann, Beutel and Zwerenz (2017) looked more closely into clinicians' adoption of online interventions in routine inpatient care, in Germany. These researchers used a sample of 128 participants from varied professional groups such as psychologists, nurses, social workers and art therapists. They reported that 88% of these participants expressed rather low intentions to accept and adopt online interventions. However, it was also found that prior experience in online interventions accounted significantly for higher acceptance ratings among clinicians. These findings suggest that one's hesitation to adopt online interventions in routine practice could also be rooted in their limited experience and understanding of the potential usefulness, uses and applications of online interventions. As such it is proposed that clinicians' lack of expert understanding, as to the perceived usefulness, and level of competence in online therapy, may play a motivational role in the uptake of online interventions in routine care. On this basis, motivation is identified as the second clinician-related predictor, which the current thesis will seek to assess.

It is noted that the current propositions contribute critically, to the previously reported mismatch between research-based evidence, on the effectiveness of computerised interventions (e.g. iCBT), and their practice-based effectiveness, which appears to be compromised by the soaring client dropout rates (Edmonds et al., 2018; Richards et al., 2018). Computerised protocol approaches assume that a person-to-person therapeutic connection through cyberspace is not an essential component of effective online interventions. This has led to the belief that an expert therapist's input to the therapeutic process would be unnecessary (Andersson & Hedman, 2013). The emerging dropout rates associated with these approaches, however, point to the opposite direction.

As indicated earlier, interventions that incorporate therapist assistance tend to perform better in terms of their client engagement rates (e.g. Baumeister et al., 2014). As such, the observed dropout rates could be linked to a mismatch between clients' expectations for a human connection online, and the nature of computerised therapeutic provision which is limited in providing that. In this sense, the current thesis invests in understanding how online practicing clinicians could be facilitated in better attending to the typical online client's expectations for high-quality human connection in cyberspace. This approach is expected to provide a new understanding as to the nature of client engagement in online therapies, which would support the current thesis' unique contribution to the literature.

### **2.3. Motivation literature and clinicians' intentional behaviour online**

Thus far, the current chapter has highlighted key aspects in the provision of online therapy, as those align with clients' expectations of a credible online therapeutic alliance. It has also identified two clinician-related factors that appear promising in predicting uses and applications associated with this type of online therapy provision. These potential predictors are clinicians' motivation to work online and awareness of key considerations in online therapy (AKCOT). This section of this chapter seeks to identify the specific motivation

factors that will later be assessed as to their predictive effect against the provision of online therapy. A subsequent section will then identify the key online theoretical and practical considerations that will underpin the AKCOT predictor in the same exploration.

Literature points to two reasons as to why a therapist might be motivated to work online without the necessary preparation and against existing guidelines. The notion of online self-presentation (e.g. Attrill, 2015) and hyperpersonal computer-mediated communication theories (HCMC) could provide an insight as to this potential individual motive. According to Walther (2008), the fact that online communication affords reduced interpersonal cues (such as the absence of visual contact in email communication) provides an opportunity for selective self-presentation and manipulation online. The manipulation of one's online self-presentation is as a goal-oriented process, inherent to the nature of cyberspace and online behaviour (Attrill, 2015). As such, Harrad and Banks (2015) suggest that online self-presentation is influenced by one's *individual motivations* engaging in any given online interaction or behaviour. They propose that, if a therapist expects to never meet their client in person, they might be inclined to present inaccurate information idealising their online professional profile. As such, with the protection of the screen in place, clinicians could just claim to have the training and knowledge needed to work online even when they really do not.

The individual motivation here, as per Harrad and Banks (2015), would lie in an external, to the self, source such as the need to be perceived as a competitive service provider and attract prospective clients, with an end goal to increase their client base and monetary returns. The lack of universal enforcement of the existing regulations around training requirements, in combination with online self-presentation principles, would make it possible that clinicians could, at least, be tempted to claim skills and knowledge falsely. This means

that their online services might fall out of their scope of competence and expertise, which could lead to harmful consequences for the online help-seeking population.

From a normative tendencies' perspective, Blackmore et al. (2014) explain that ill-informed or misguided perceptions as to what online therapy entails tend to gradually accumulate among groups of colleagues inevitably influencing one another (see also Anthony et al., 2014). This might consist of another motivational factor (which is also external to one's self), which could drive a not qualified therapist to work online. For instance, one could be practicing online without having the necessary skills and knowledge because their peers are believed to be working online in the same way. This proposition resonates partly with the principles of the theories of reasoned action (TRA) and planned behaviour (TPB) (Ajzen, 1991; Montano & Kasprzyk, 2015). The foundation of TRA lies in the suggestion that one's attitude towards a given behaviour, along with the subjective norm associated with that behaviour, can influence the intention to perform the behaviour (Fishbein & Ajzen, 1975).

A few years later, Ajzen (1991) noted, however, that the TRA model was limited. Even when an individual intends to perform a behaviour, they can still be restricted by situational requirements such as skills, knowledge, confidence and experience. These factors represent the individual's *actual* control over that behaviour, which according to Ajzen (1991) is approximated by the construct of *perceived behavioural control* (PBC) and underlies both behavioural intention and actual behaviour. Madden, Ellen, and Ajzen (1992) suggested that PBC is an especially strong predictor of behaviour when the individual's volitional control over a behaviour is low. Its predictive influence declines when it (PBC) becomes an accurate reflection of *actual control* over a given behaviour (Montano & Kasprzyk, 2015). This premise is of critical importance in the context of online therapy, which due to its lack of universally accepted training regulations and its specialist outlook can be said to represent a context of low volitional control for the clinicians.

Beyond the external subjective norm's pressures, the therapist's likelihood to adopt online interventions in routine practice, therefore, is dependent heavily on their associated PBC. This would involve individual aspects of motivation such as competence in a specific intervention, specialist skills, knowledge and access to relevant resources. The premise of PBC, and its proposed function by TPB, resonates with the current thesis' clinician-led view on online client engagement as expressed earlier (see also Hennemann et al., 2017). This implies that clinicians have to work actively and skilfully to address the client's expectations, which means that beyond their intentions, they would also need to have the necessary knowledge and skills (or PBC) to do so effectively. This proposition resonates with Bandura (1977; 1982) who also claimed that behaviour is strongly influenced by the individual's confidence and ability in performing the behaviour.

The TPB has been used by Wilson, White and Hamilton (2013) who investigated psychologists' tendency to integrate complementary and alternative therapies (CAT) into their routine practice. Online therapy can be seen as a type of CAT, since it consists of a set of new tools (such as CMC dimensions), that clinicians would need to integrate into their routine practice. Therefore, Wilson et al.'s (2013) work appears useful in evaluating the role of PBC as it is conceptualised in the current thesis project. These researchers hypothesised that the predictive ability of the traditional TPB could be improved if factors such as knowledge (about CAT), perceived risk and gender were included in the analysis.

This improved model (Wilson et al., 2013) explained 51% of the variance in the actual behaviour of recommending CAT and 49% of the variance in the intention of recommending CAT. These findings showed a notable improvement from Armitage and Conner's (2001) meta-analytic review on the original TPB model, which had previously reported to predict only 39% of the variance in intentions and 27% in actual behaviour uptake. Based on their results, it is suggested that knowledge of the risk factors related to a given

CAT, which implies an advanced understanding of its expected usefulness, can play an important role in the adoption of new interventions in routine care. In respect to the current thesis, Wilson's et al.'s (2013) findings indicate that indeed the construct of PBC, and the factors it encompasses, would underpin the clinician's sense of competence and confidence in endorsing online therapies, which would be instrumental in predicting the adoption of a given set of online interventions.

#### **2.4. Technology acceptance model**

Based on the theoretical framework of TPB, Davis (1989) developed the technology acceptance model (TAM). Instead of the construct of PBC, this model is based on two main categories of beliefs which predict the acceptance or adoption of a new technology: *perceived usefulness* refers to a person's belief that the adoption of a technological system would improve their job performance and outcomes; and *perceived ease of use* refers to the belief that adopting the system in routine practice would require minimum effort. Lazuras and Dokou (2016) used TAM to investigate 63 psychiatric practitioners' intentions of accepting a new technology in routine practice. Their findings reinforced the idea that if a clinician is sufficiently skilled in certain key aspects of the technology, and if they can see how using these improves outcomes (*perceived usefulness*) they will be likely to put them into practice (see also Vis et al., 2018).

Lazuras and Dokou (2016) suggest, however, that *perceived ease of use* can be viewed as a neutralised concept for the time being. This suggestion is based on the assumption that therapists, nowadays, are generally technologically savvy and tend to find technology easy to use (see also Corrin et al. In Attrill-Smith, Fullwood, Keep, Kuss, 2019). Based on this proposition, it is recognised that understanding the predictive role of *perceived usefulness*, in relation to the adoption of online therapies, might be a more pressing issue than



focusing on *perceived ease of use*. Although this position is debatable, it is accepted in the current thesis to ensure that the current project remains within its contextual constraints. The implications of this decision are discussed in later chapters as appropriate. As such, the current thesis focuses its attention in further understanding the predictive capacity of the *perceived usefulness* which is based on the notion of PBC, and external motivators, such as expected monetary gains as per Harrad and Banks (2015), against the provision of key online therapy uses and applications.

The main limitation of the TAM and TPB frameworks, however, is that they are mostly relevant in exploring clinicians' intentions of acceptance of a given set of interventions. This means that while these theoretical frameworks are relevant to the current thesis, they might not be that useful to support practically the current research project. This proposition is based on two reasons. Firstly, the current thesis seeks to explore the motivation of online practicing clinicians who have already accepted and adopted online interventions in their routine practice. Thus, it will be able to assess their adoption of specific practices that are known to facilitate a sound and credible therapeutic alliance online. As such, the TPB and TAM, which are based on intentions of acceptance or adoption rather the actual behaviour, might not be readily adjustable to meet the research needs of the intended exploration because they could not provide adequately suited research instruments.

Secondly, TPB is heavily based on the notion of subjective norms, which is seen as a key influential factor to the adoption of a given behaviour, something that is difficult to capture in terms of online therapy. This difficulty lies in the increased diversity in professional opinions and views as to the identity of the online therapist and what qualifies as appropriate therapeutic practice online (e.g. Anthony et al., 2014). Thus, adopting a research framework that relies on the influence of the online therapists' subjective norm might lead to unreliable measurements. With this being said, the next paragraphs consider additional

motivational literature, in the pursuit of a theoretical framework that suitably captures the essence of the corresponding constructs of PBC (such as perceived competence), perceived usefulness and extrinsic motivators (e.g. Harrad & Banks, 2015), and at the same time could address the current practical concerns that have been identified in relation to TPB and TAM.

## **2.5. Self-determination theory and online therapists' motivation**

Deci and Ryan's (2002; 2011) self-determination theory (SDT) provides a useful theoretical framework in this sense. Alfonsson et al. (2016) employed this framework, and its associated research instruments, to investigate whether motivation predicts dropouts in an iCBT treatment program. In this study, participants were required to take part in a four-week course of relaxation intervention. This means that these participants had actively decided to undertake (and had therefore already accepted) the online intervention at hand, much like the intended population of the current thesis project would have accepted and already adopted some sort of online interventions in their routine practice.

Considering the current project's theoretical framework, which has been based on the notion of PBC, perceived usefulness, and external motivators, SDT appears to capture the essence of these constructs. This makes it possible for the main research questions of the current project to be formulated based on a synthesis of the thus far literature considerations and the SDT theoretical framework. The SDT conceptualises perceived competence as a key motivational function (which corresponds to PBC) that underpins the adoption of a given specialist behaviour. It also provides complete theoretical constructs such as intrinsic and extrinsic motivation, that map well onto the notion of perceived usefulness and the external motivators, which have been highlighted earlier. As such, it is expected that SDT fits the needs of the current thesis project better than the TAM model.

The self-determination theory (SDT) (Deci & Ryan, 1985; 2000a; 2011) provides a theory-driven framework and views intrinsic motivation, which encompasses perceived competence, as the central factor that drives specialist behaviour. It assumes that human motivation is based on the three psychological needs of *autonomy*, *competence* and *relatedness*. This makes the SDT well-suited to capture the subtleties associated with the uptake of specialist behaviour (as opposed to the generic behaviour of adopting any online interventions) as per the focus of the current thesis. In this respect, it is stated that intrinsic and extrinsic motivation are the two main types of motivational dimensions underpinning volitional behaviour (Deci & Ryan, 2000a). They interact with one another in different contexts to determine one's sense of initiative and volition. Intrinsic motivation reflects one's internally-based factors such as perceived competence, enjoyment, containment and pressure or tension in relation to a given behaviour. Extrinsic motivation refers to external to the self-factors, such as peer-pressure, monetary gains or other external rewards which drive one's motivation to engage in a task or activity (Deci & Ryan, 2000a). In terms of online therapy, clinicians' intrinsic motivation can, therefore, be associated with their perceived usefulness, a sense of autonomy overcoming external expectations and their perceived competence adopting key online therapy uses and applications.

It is noteworthy that SDT theorises that these components also play an influential role in clinicians' motivation to expand on their own therapeutic skills and professional growth. In terms of online therapy, this theoretical premise represents the professional growth and specialist training an offline clinician would need to undergo in meeting the unique demands of online therapeutic practice. According to existing literature, this aspect is key in fully understanding the process of uptake of online therapy specialist interventions, which is the focal point of the current thesis project. Feijt et al. (2018) suggest that this process is a gradual one, and moves through various stages of adoption, which range from limited to

innovative and expert uses of online interventions (see also Rogers, 2002, 2003, 2010). These researchers suggest that adoption of online interventions is governed by two main factors: 1) clinicians' awareness (of what online therapy implies) and 2) an intrinsic motivation to adopt and use online interventions. These factors are interdependent with the gradual process of professional growth and the development of online skills, which in turn determines whether one's use of online interventions would be limited and constrained or diversified and expanded being underpinned by a level of online expertise and experience. In simple terms, one's awareness as to the various aspects of online therapy would bring additional interest and a sense of perceived competence, which in turn would precipitate increased intrinsic motivation and an interest to further invest in the endorsement of specialist online therapy provision.

Finally, as explained earlier, the construct of extrinsic motivation (Deci & Ryan, 2000a; 2002) is associated with external, to the self, professional gains and rewards such as monetary gains (Harrad & Banks, 2015), pride or peer-recognition (Blackmore et al., 2014). In terms of SDT, extrinsic motivation is influenced by a series of contextual and intra-personal factors (Deci & Ryan, 2002b). These factors refer to the individual's internal sense of reward or punishment, conscious valuing, self-awareness and compliance to external pressures to perform a given behaviour. These internalised regulatory processes interact with external motivators, and their main function is to reduce any anxiety and guilt that might emerge due to the adoption of incongruent behaviours. In Deci and Ryan's (2002b) terms; therefore, extrinsic motivation becomes a multi-layered construct, and it is necessary to be explored as such.

According to Mallen et al. (2005b) from a counselling psychology perspective, online therapy holds the potential to improve access to psychological therapies through stigma-free and inclusive practices, which could further promote social justice through

cyberspace. This is said to be possible through the adoption of diverse and disinhibiting interventions which are aimed in facilitating improved online help-seeking behaviours (e.g. Richards et al., 2018; Suler, 2004; 2016). On this basis, the therapist's internal values, towards inclusivity and diversity in mental health, could influence the degree to which he or she adopts diverse modes of online communication, which would also mean striving to move away from FtF informed practices online. As such, the degree to which one resonates internally with the prospect of improved access to care, and whether their professional circle reinforces attitudes of inclusivity and diversity, would interfere with the degree to which he or she subscribes to the benefits afforded by the cyberspace which are associated with disinhibiting, stigma-free and inclusive online therapy applications. While the SDT provides the main, generic theoretical structure to this multi-layered view of extrinsic motivation, it is necessary to look elsewhere to fully understand how clinicians' stigma attributions could influence the adoption of key online therapy interventions.

## **2.6. Stigma attributions and online therapy applications**

Online therapy is viewed, in the current thesis, as a way to improve access towards stigma-free and disinhibited psychological therapies across mental health care (e.g. Richards et al., 2018). The attribution theory (Weiner, 1980; 1988) is a theoretical framework of human motivation and behaviour which assumes that individuals utilise information, that exists in their daily interactions, towards making causal attributions to day-to-day behaviours. This cognitive process is theorised to foster an emotional reaction, which in turn determines the individual's behaviour. Corrigan, Druss and Perlick (2013), indicate that there are additional factors that could act as clinician-related barriers towards the endorsement of a given behaviour. One such factor is the clinician's tendency to seek and engage with mental health support themselves. Another factor is the lack of professional knowledge about various mental health treatment options. These factors could influence the cognitive attributional

process of the clinician, which governs his or her interpretation of reality. If this process is infused with stigmatising attributions would result in segregating instead of inclusive professional behaviours. In online therapy terms, this would lead to the adoption of online interventions that are limited and non-inclusive, which would not be aimed at encouraging improved access to online therapies or facilitating an accepting and warm therapeutic alliance.

To this effect, Corrigan et al. (2003) examined the relationship between psychiatric physicians' and psychiatric nurses' levels of stigma attributions and treatment-related decisions. They found that psychiatrists who endorsed stigmatising attributions about their clients were less likely to refer them onwards for a relevant examination proposes which would represent inclusivity and sensitivity to the diverse needs of the patient. Reduced stigmatising attributions were significantly associated with an openness to consider alternative therapies and refer the patient for associated treatment. Corrigan et al. (2000, 2003, 2013) developed a validated model suggesting, that high endorsement of stigma attributions would result in potentially effective treatment options not being considered by mental health clinicians.

In online therapy terms, it follows that clinicians' level of endorsement of mental health stigma attributions would impact the adoption of diverse online interventions that could facilitate stigma-free accessibility to online therapies. Corrigan et al. (2003) would say that prospective online clients could, therefore, fail to access appropriate care online because online practicing clinicians failed to offer accessible, diverse and engaging online services. No studies appear to exist which investigated the relationship between stigma attributions and motivational aspects in relation to the provision of online therapy applications. As such, the current thesis adopts Corrigan et al.'s (2003) attributional model, which will be used

alongside the SDT framework, to ensure a well-rounded exploration of the construct of extrinsic motivators that could predict the provision of online interventions.

## **2.7. Cyberpsychology and online therapy**

The previous section has identified the motivational factors of perceived competence, intrinsic and extrinsic motivation and attributional style, as potential predictors of online therapy uses and applications. It was indicated earlier that clinicians' awareness of key considerations in online therapy (AKCOT) could also have a predictive effect on the adoption of online therapy uses and applications. In this respect, the next paragraphs review the following two areas of literature. Firstly, cyberpsychology literature is reviewed in the pursuit of a detailed understanding of the online theoretical and practical considerations which underpin the key communicational benefits of cyberspace, such as diverse, flexible, disinhibiting, safe, ethical and accessible online communication. Secondly, specific clinician-led uses and applications of online therapy (abbreviated as, outcome online therapy uses and applications-OOTUA), which correspond to the above online communicational benefits, are identified. The factor of OOTUA will be the main outcome factor of the current body of work, against which the (previously identified) motivational and the present AKCOT predictors will be tested.

### **2.7.1. Theoretical considerations: Diversity of online communication**

Unlike FtF communication, cyberspace offers a diverse array of modes of communication such as email, webcam or instant messaging. This diversity enables the client to choose their preferred mode of communication, which implies a level of empowerment and control over one's therapeutic plan (e.g. Dowling & Rickwood, 2013; 2014; Waugh, 2017). In terms of the online therapeutic alliance, this is a key consideration as online clients tend to value the possibility of increased empowerment and control in therapy (Berry et al., 2019;

Kauer et al., 2014; Lal et al., 2015; Doughty & Wykes, 2016). Being aware of this consideration, online practicing clinicians would seek to use more diverse modes of communication, instead of single-mode communication, which would increase their effectiveness and competence in establishing a sound therapeutic alliance.

Each mode of communication supports a different outlook of intervention broadening the scope and possible configurations of therapeutic intervention in cyberspace, something that is not possible in FtF therapy. For instance, unlike video-conferencing sessions, instant messaging interventions tend to be brief. The boundaries of the time and meeting place of therapy have been traditionally held by the therapist, but in the online context the client can take a more active role. This possibility for active participation is cited to open new avenues for better client engagement and empowerment, which could challenge even the most rigid boundaries of authority and power traditionally held by the therapist (Waugh, 2017). As such, diversity of communication in online therapy is considered a key element underpinning improved client engagement and active participation. It supports the online therapeutic alliance by giving an active voice to the client, and addresses inherent power imbalances in the therapeutic encounter by meeting associated client preferences and expectations.

Existing research points to a potential link between clinicians' awareness as to the therapeutic benefits of diversified online communication and the actual use and application thereof. Feijt et al. (2018) conducted a qualitative exploration of 17 Dutch psychologists working within the local health system. These researchers found that at the early stages of their online career, psychologists tend to be drawn to online modes of communication, that they are already familiar with, such as email or video-conference platforms. This implies that they are drawn to limiting or non-diversified online communication, due to their lack of experience or understanding as to how the various channels of communication could be used



for therapeutic alliance purposes in cyberspace (see also Cipolletta & Mocellin, 2016). Alfonsson et al.'s (2016) work, however, shows that client dropouts, at the early stages of therapy, are predicted by clients' perceived credibility as to the online interventions used. As follows, the clinician's difficulty adopting a diverse outlook of intervention, which could have matched the client's expectations as to the unique benefits of CMC, could be linked with their lack of familiarity and awareness of key associated considerations.

### **2.7.2. Theoretical considerations: Cyber-therapy theory**

From a theoretical standpoint, the use of diverse modes of communication encompasses different communicational qualities, which are referred to by Suler (2016) as *communicational dimensions*. These include the real-time dimension as opposed to non-real time communication, (also known as synchronous or asynchronous), text-based, sensory-based, automated group and individual-based interactions. According to Suler (2016), each mode of communication encompasses one or more of these dimensions, in varying degrees. For instance, people communicating via email cannot see each other in real-time but can use written communication such as text, emojis or gifs to convey their message. In contrast, a meeting via video-conference platforms allows real-time interaction but does not provide the real-life sensory feel one gets from a FtF communication. On this basis, for Suler (2016), the client's clinical needs, as well as their ability to express themselves online, are aligned with the above range of dimensions of CMC.

As such, in the pursuit of an effective online intervention or therapeutic connection with the client, the online therapist's role would be to identify and combine those modes of communication which could facilitate a better expression of the various aspects of the client's self. This entails a key consideration in terms of cyber-therapeutic theory, which could enable the online therapist to recognise the therapeutic functions and usefulness of each mode of

online communication. In practical terms, some examples of such combined online interventions might be: using saved transcripts to facilitate future reflection as an adjunct to ongoing video-conferencing sessions or utilising email to further reflect on interventions offered via instant chat.

Other theorists such as Anthony and Nagel (2010) view online therapy from an inherently relational lens starting from the proposition that an online encounter can be considered to be therapeutic, as long as all aspects of FtF communication are present. This means that combining modes of communication provides a way of compensating for the FtF elements that may be absent in cyberspace (see also Valkenburg & Peter, 2007). This proposition is originated in a seminal study, by Gunn and Gunn (2000), which found that couples who maintained long-distance relationships and communicated via CMC reported feeling greater love and intimacy than those who did not use the Internet. Such findings pointed to the idea that a relational and emotional, person-to-person connection is indeed possible via CMC (Walther & Parks, 2002). This is a key theoretical premise which could dispel some misconceptions and unfounded concerns, that non-specialist trained clinicians have expressed over the years as to the relational viability of online therapeutic communication (e.g. Hennemann et al., 2017; Perle et al., 2013).

In specific terms, Anthony and Nagel (2010) point to the existence of six interpersonal themes that explain the process of the online therapeutic relationship. *Rapport* (akin to the notion of the therapeutic alliance) and *presence* and *openness*, as to the therapeutic relationship both encompass the multi-modal nature of online communication, and the possibility of non-defensive and disinhibited self-expression. *Lack of bodily proximity* is suggested to be compensated for through text-based communication and an element of *fantasy* as to the therapist-client relationship. Finally, *perceived anonymity* is another key element that contributes to the online therapeutic process and is not available in the offline

context. The online therapist's role, in Anthony and Nagel's (2010) terms, revolves around their expertise and technical ability to realise and combine the current six themes usefully within the online context. This view, of the therapist's role, points to the prerequisite that various modes of communication need to be used in a theory-informed way and with some expertise, in order to be effective in incorporating the above dimensions appropriately.

In this sense, the notions of *fantasy* and text-based communication are of pivotal importance in online therapeutic communication (e.g. Dunn, 2014); therefore, are discussed in-depth. To best understand the concept of *fantasy*, a brief introduction to the notion of synchronicity of communication is needed. Online communication is placed on a spectrum ranging from low to high synchronicity (Kalman & Rafaeli, 2007). Low synchronicity (or asynchronous communication) implies that communication takes place in elapsed time. High synchronicity (or synchronous communication) refers to real-time interactions that have no time lapse at all. (Kalman & Rafaeli, 2007). This implies that the therapeutic dyad could choose the level of synchronicity they would like to employ in different instances at different points in time. This is a unique possibility compared to FtF therapy, where verbal exchanges always happen instantaneously. Therefore, it is not surprising that a clinician, who is not aware of the present characteristics and possible configurations of online communication, would seek to have their online work informed by the FtF and single-mode configuration of communication (e.g. Mallen et al., 2005).

In therapeutic terms, the primary benefit of asynchronicity is that it allows for a space of anticipation to occur, which enables increased self-reflection and disinhibited self-expression, between each communication episode (Farber & Nitzburg, 2016; Suler, 2016; Walther & Parks, 2002). This space of anticipation can be therapeutic as it enables the client to see more into their thoughts and reflect deeply on their emotions, before, after and during the process of composing an email to their therapist (Rummell & Joyce, 2010). This

process can also be enhanced through diversified techniques of communication, such as using saved transcripts or other material of therapy to facilitate the therapeutic reflection or discussion at later stages in therapy (see also Suler, 2016). In this sense, a therapist that uses only the video-conference mode would be limited in their ability to exploit the benefits of or meet the online client's expectations as to text-based asynchronous communication.

Anthony and Nagel (2010) (see also Francis-Smith, 2014) propose that an element of interpersonal *fantasy* seems to be active in that space of anticipation, which compensates for the absence of physical proximity and sensory cues (in Sulerian terms this is called *solipsistic introjection*). The material of those fantasies is of critical therapeutic importance (both offline and online), as they often contain material related to past developmental, traumatic experiences and defences that operate at a subconscious level (Cabaniss. 2016). Cyberpsychology literature shows that this phenomenon might be observable outside the online therapy context.

Harwood, Dooley, Scott and Joiner, (2014) investigated the effects of the use of smart-devices on mental health, finding that text messaging was correlated significantly with anxiety. They explain that text-based communication might be more appealing to anxious individuals and highlighted that long-term use of this space of anticipation (until the responder's new message is received) could precipitate increased anxiety. From Anthony and Nagel's (2010) perspective the precipitation of that anxiety might be due to the function of anxious fantasies. In simple terms, in the midst of uncertainty and anticipation, the individual's fantasies would get activated to aid the interpretation of reality. If those are coloured by negative and threatening past experiences, they will precipitate corresponding feelings for the individual. On the other hand, Harwood et al.'s (2014) findings also point that, an anxious client who would normally find the experience of accessing FtF therapy overwhelming could find text-based communications easier to access. It is crucial, therefore,

that the therapist is aware of the potential therapeutic function and implications of fantasy and asynchronous communication online, and above all can recognise the key risks associated with each mode of communication.

An additional key consideration in this respect, therefore, is as to whether online therapy is suitable for clients experiencing severe and enduring mental health issues (Bolton, 2017), which quite often are fuelled by increasingly negative and painful fantasies. Theoretically speaking, the key question here would be as to whether a client can be interpersonally functional in the absence of immediate physical presence. As derived from virtual reality literature (e.g. Parola, Johnson & West, 2016; Biocca, 1997), the ability to differentiate the inner experience from the external world can be a key cognitive function in terms of online therapy. In severe cases of mental disturbance, the ability to exercise accurate cognitive judgement, differentiating internal from external experience is severely compromised (e.g. Alvarez-Jimenez et al., 2013). As such, the individual is rendered unable to allow interactions within virtual worlds (or with a physically absent therapist) to be experienced as if they were real (e.g. Beauchaine & Hinshaw, 2017). In this sense, the online therapist needs to be aware that severely disturbed individuals might find it impossible to adhere to and engage with certain online modes of communication (Parola et al., 2016). A thorough assessment process needs to be in place enabling clinicians to gauge the suitability of each online intervention according to the psychological needs and clinical presentation of each client. This assessment could even incorporate various modes of communication to determine which of those are likely to work best for each unique client (Suler, 2016).

Richards and Richardson (2012) align with Weitz (2014) proposing that a well-documented and effective FtF-based intervention is not guaranteed to be as effective online unless it is adapted to fit the governing premises of asynchronous communication. Therefore, clinicians cannot rely on their offline skills while working online, and they should

enhance those with appropriate training (Anthony, 2015). This point demonstrates yet again that lack of appropriate training and understanding of the current theoretical considerations could lead to online interventions that do not align with effective, credible and engaging online communication. To further understand how the presently outlined theoretical premises translate into online work, it is vital that the notions of perceived anonymity and disinhibition are now explored.

### **2.7.3. Theoretical considerations: The online disinhibition effect**

The aspects of perceived anonymity and invisibility have been reported to promote increased self-expression both in online and offline environments (Joinson, 1998; Kraus, Stricker & Speyer, 2011; Suler, 2004; Scharff, 2013). In online therapy terms, this phenomenon is referred to as online disinhibition. From a cyberpsychology perspective, Suler (2016) explains that individuals may experience a sense of perceived anonymity or invisibility online (due to the protection of the screen) which can activate two main types of disinhibition: toxic (such as online bullying, flaming) and benign disinhibition (such as seeking compassionate relationships online). A deeper understanding of the process of online disinhibited self-expression is possible through Berger's (1986) uncertainty reduction theory (URT). It is proposed that when non-verbal cues are absent, individuals will seek to compensate for the lack thereof in an attempt to restore certainty of communication. They could achieve this by engaging in increased self-disclosure online, which links to the notion of online self-expression as described above (Suler, 2016).

Barak and Gluck-Ofri (2007) who based their work on the social identity model of deindividuation effect (SIDE) (Reicher, Spears, Postmes 1995) viewed online self-disclosure as a context-dependent process, which increases according to the norms of disclosure that exist in each context. A similar perspective is provided by Attrill (2012) who proposes that individuals have a volitional control over the depth of information they choose to share in

different sites or online *arenas* (such as instant messaging and social networking sites-SNS). While online therapy can be viewed as another online arena, self-disclosure in this context differs fundamentally compared to the online arenas studied by Attrill (2012). The majority of research in online self-disclosure has taken place within generic communication contexts (e.g. Attrill, 2012; Nguyen, Bin, & Campbell, 2012; Radovancevic, 2013) which do not capture fully the unique features that underpin the online therapeutic communication between a therapist and the client.

As oppose to generic and casual communication, at the therapist's disposal, there are several skills, mostly relational, that encourage warmth and non-judgmentality, which can be used to promote, purposefully, a sense of trust and containment facilitating the disinhibited engagement and increased self-disclosure of the online client. This principle is anything but new in the domain of psychotherapy. For instance, in the pursuit of expressive disinhibition, psychoanalytic therapists, go as far as to sit behind their client to ensure that the latter will not be preoccupied with translating the first's non-verbal reactions and possibly worrying, they are being judged (Cabaniss, 2016). This attitude of the therapist fosters a climate of uncertainty, which prompts the client to express their thoughts and emotions in an uninhibited manner (the core psychoanalytic technique of *free association*), so that subconscious and repressed material can emerge.

From an online therapist's perspective, the process of disinhibition underlies central therapeutic functions that enable a person-to-person connection, such as the one the current thesis suggests that online clients seek in cyberspace (e.g. Baumeister et al., 2014). In this sense, the online therapist would seek to utilise different levels of disinhibition (through the various modes of communication) in the pursuit of less defensive expression of the isolated, rigid and dysfunctional aspects of one's online and offline self (Suler, 2004; 2016). Online

text-based interventions exclude visual cues and are popular among therapists as to their potential to enable the therapeutic prospect of disinhibition online (e.g. Francis-Smith, 2014).

### ***2.7.3.1. Text-based Computer-Mediated Communication***

In terms of online therapy, text-based online communication is inherently related to the effect of “cues-filtered-out” (CFO) (Walther & Parks, 2002). This implies that communication cues (verbal and non-verbal) such as gaze, vocal intonation, minimal verbal encouragers such as “hmm...”, and eye contact which are commonly encountered in FtF communication are filtered-out in the text-based context. Bambling, King, Reid and Wegner (2008) investigated more closely the therapeutic premises of online communication in the context of the online therapeutic relationship. They reported that text-based communication made it easier for clients to disclose complex and emotionally charged issues. This effect was attributed to power imbalances being levelled between the client and therapist, and an increased sense of emotional safety contributing to the client feeling uninhibited. These findings have been replicated in Francis-Smith’s (2014) grounded theory study on counsellors’ experience of email-based therapeutic relationships. This writer reported among others that, communication via email shifted some power in the clients’ hands enabling them to utilise the available resources with greater flexibility (such as email the therapist at their best suited time).

In Francis-Smith (2014), some counsellors, also, reported that they would encourage their online clients to use this sense of power given to them through cyberspace. This, in turn, has created a greater need for therapists to get the boundaries established right, so they could ensure containment of the client’s increased control within a safe, therapeutic environment (Francis-Smith, 2014). These findings link back to Suler’s (2016) view on the utility of disinhibition through text-based communication and Weitz’s (2014) position on the necessity of specialist training, so that safety of text-based disinhibition can be ensured. Crucially,



however, Francis-Smith (2014) suggests that in this complex process, therapists seem concerned of misinterpreting their clients (e.g. going too deep too fast) and being unable to manage the client's disinhibition due to their increased sense of control (see also Bambling et al., 2008). These considerations reinforce the proposition that text-based communication for therapeutic purposes is a complex process and is associated with several potential risks, which a non-sufficiently trained therapist cannot be aware of (Waugh, 2017).

From a theoretical standpoint, Anthony and Nagel's (2010) conceptualisation of the therapeutic use of text-based communication is rooted in social information processing theory (SIP) (Walther, 1992; 2008) which maintains that human beings are inherently motivated by their basic need for inter-relational affinity with others. Consequently, they would seek to adapt their communication online and utilise any cues available to achieve their relational and interpersonal goals (Walther, 1992; 2008). In text-based terms, this is possible by using textual paralinguistic cues (TPC) such as emoji's or emoticons (😊 😞 😊), character repetitions (I screamed... Nooo!), varied fonts size (I wanted to DISAPPEAR...) and nonstandard or multiple punctuations (!&#%#!) (Walther, 2011).

The utility of TPC has been assessed by Riordan and Kreuz, (2010) who analysed five naturalistic corpora collections including social messages (in the majority) via varied modes of communication (emails, blogs, chat- rooms). They found that the role of TPCs in CMC was mapped as follows: 36% used for disambiguation of the message, 24% to regulate communication, 15% to express the writer's emotions and 10% to strengthen the message content. In response to Francis-Smith's (2014) participants' concerns of text-based misunderstandings (see also Perle et al., 2013; Hennemann et al., 2017), the current body of literature indicates that, if the various TPCs are used holistically, skilfully and thoughtfully by online therapists, they can indeed increase the clarity of text-based meaning in therapy (see Kalman & Gergle, 2009). This indication provides a useful premise for the online

therapist who strives to express themselves accurately, pursuing meaningful emotional connection during the process of writing a text to their client.

As such, the primary tasks of the online therapist would be to accurately convey and express their empathic feelings (a person-centred therapist, for instance), that emerged in them, through a text-based response. Harris and Paradice (2007) indicate that the more cues employed in a message, the stronger the recipient would judge the sender's emotion. Empathy literature, on the other hand, suggests that empathy at different depths can have different effects and impact on the client, depending on the stage therapy is at (Mearns, Thorne & McLeod, 2013). A too deep or intense expression of empathy at an early stage of therapy could scare the client away. Too little empathy at later stages of therapy can reduce client engagement. As such, the non-considerate or non-skilful use of TPC might result in an emotion being conveyed with an unnecessary intensity which can, in turn, render the intended intervention non-effective at many levels.

As indicated earlier, literature that investigated client-related factors that predict dropouts highlighted empathic utterances, rapport and strong working alliance as key predictors for client engagement (Baumeister et al., 2014; Berger, 2017; Hadjistavropoulos et al., 2018). As such, the basic premises of SIP theory (Walther, 1992; 2008) and Anthony and Nagel's (2010) work, show that text-based communication can be used skilfully enabling the clinician to compensate for the CFO effect. With these premises in place, it is likely that client engagement would improve through the skilful development of an appropriate emotional bond and clarity of communication through text (Dunn, 2014). It is on this basis that Walther and Parks (2002) coined the term 'cues-filter-in' (CFI), suggesting that text-based communication such as email has the potential to achieve levels of relational communication equal to FtF communication.

#### **2.7.4. Practical considerations: Online security in therapy**

Based on the literature reviewed thus far, online therapy seems to put notable technical demands on online therapists in association with the diverse nature of online communication, relevant cyber-therapeutic theories and the therapeutic functions of online disinhibition. It was proposed that awareness in those considerations could enhance the development of an online therapeutic alliance, but the current chapter has not reviewed in-depth the practical and safety considerations that are associated with that. The list of potential risks associated with online interventions can be quite long, especially when it comes to the therapist's duty of safeguarding their clients and the overall process of therapy. The next paragraphs aim to identify key considerations in relation to online security and ethical dilemmas of online therapy and the associated practical applications thereof.

Several organisations such as the International Society for Mental Health Online ISMHO (2000) and the Psychiatric Society for Informatics have laid out a series of practical considerations, which need to be in place so that the process of online therapy remains safe and ethically sound. Based on these guidelines, it appears that it is the therapist's responsibility to be informed as to the processes involved in establishing a secure online therapeutic connection and educate their clients accordingly. For instance, it is recommended that therapists are transparent explaining how the confidentiality of therapy is maintained online, and what steps the client themselves need to take to protect any material stored or transmitted online (Weitz, 2014). Unlike offline therapy, the online client should be guided to adhere to certain practices (such as using a designated secure platform and password protected digital vaults), so that both ends of the therapeutic connection (therapist and client's end) can securely contain the therapeutic material transmitted or stored online (Harris & Birnbaum, 2015). If a therapist is oblivious and not trained to deal with these unique considerations, they are likely not to put in place associated measures jeopardising the safety

of the therapy process (Rummell & Joyce, 2010). In addition, they would be unable to fully inform their clients as to the security risks of online interventions, rendering the client unable to provide their informed consent about receiving therapy online.

From a theoretical standpoint, the hyperpersonal computer-mediated communication model (HCMC) (Walther, 1996; 2007) proposes that perceived interpersonal similarity leads individuals to seek further information about their communicators. Harrad and Banks (2015) suggest that in online therapy terms, a client may focus on identifying perceived similarities between them and their therapist encouraging a sense of kinship and seeking inappropriately reciprocal disclosure in therapy. As such, the client could choose to present an idealised picture of themselves selectively, which can be detrimental to the progress of therapy as the therapist will be unable to truly help the disingenuous client. As such, the processes of identity verification and acquisition of emergency contacts are both highlighted as key online safety considerations. Contrary to a potential common misconception, the client should never remain anonymous in online therapy.

From a safeguarding stance, the online therapist has no control as to who enters their digital consulting room either, which provides an added reason for access to the client's identity information. This would enable the therapist to liaise with local authorities and initiate safeguarding actions, if a client, or someone else around them, was in danger during the online therapeutic contract (Weitz, 2014b). In addition, Weitz (2014b) suggests that some provisional considerations need to be put in place regarding potential communication breakdown. In this respect, the assessment intake process needs to take place at the beginning of the therapeutic contract so that the therapist can assess the suitability of the client for online therapy. Screening around levels of suicidality, delusional or hallucinating experiences and drugs and alcohol use is also vital, as therapist's ignorance as to these issues could seriously compromise the effectiveness and safety of the therapeutic process.

Leading writers in the field, such as Anthony and Nagel (2010) and Waugh (2017) propose that online security considerations differ to some degree compared to FtF therapy. This means that non-informed or non-trained clinicians will be unable to anticipate the full range of the above risks and precautions involved in online work. Clients could be exposed to unnecessary risks and might perceive their therapist's online conduct as unprofessional, unreliable, non-credible and of low-quality. As have been seen, these elements are likely to drive disengagement from the client's perspective (e.g. Alfonsso et al., 2016). As such, it can be argued that online practicing clinicians have a deontological responsibility to be aware of key online security considerations that are associated with online therapy ensuring the welfare of their clients (Harris & Birnbaum, 2015).

#### **2.7.5. Practical considerations: Diversity of online security methods**

Professor Tim Bond, a central figure in ethics deontological and legal psychotherapy issues, explains (in Weitz, 2014, p. 206) that common psychotherapy dilemmas manifest themselves differently in cyberspace compared to offline contexts. One such example lies in the confidentiality measures that need to be in place online and offline. In a FtF context, the therapist is required not to divulge any client material or information to third parties inappropriately. It is essential that all clinical notes are stored securely, usually in a locked drawer, which prevents unauthorised access and that the clinician complies with the General Data Protection Regulation (GDPR) policy of handling personal data (e.g. Voigt & Von dem Bussche, 2017; BACP, 2015). In the online context, the picture is more complicated as each mode of online communication (email or video-conference) calls for different measures to be in place, such as digital encryption, backup systems, identity verification, software protection and firewalls (e.g. Weitz, 2014).

With the need to collect and store personal data in cyberspace, the therapist has to also adhere to relevant General Data Protection Regulation (GDPR), ensuring that the client's data and the overall therapeutic process is legally sound. To this effect, online therapists are required to be registered with the International Commissioner's Office as a 'data controller' and adhere to the relevant procedures of collecting, storing and discarding client personal information. The online therapist needs to enable the client to provide informed consent in compliance with GDPR. In this respect, the ICO or GDPR affiliate-bodies typically provide practical guidance to online therapists, as to how to ensure the integrity of their practice online dispelling myths and misconceptions about secure online practices.

For instance, Weitz (2014b, p. 181) reports that in 2012, 63% of online practicing clinicians were using Skype as their main video-conferencing platform, which is not GDPR compliant. As current GDPR guidelines dictate, any video-conferencing or text-based transmission taking place in therapy need to be able to be tracked and audited, so that the client's right to access and withdraw their information is preserved. From a legal standpoint, such information can be used in court to protect the client or the therapist, so they need to be accessible and regularly backed-up (Weitz, 2014). Any platforms used for therapeutic purposes, therefore, need to have an in-build end-to-end encryption function and explicitly state that they are GDPR compliant. Key online therapy writers such as Waugh (2017) and Weitz (2014) suggest that a therapist who is not trained to navigate and manage these dimensions of online security cannot be expected to be able to provide a safe enough online space for therapy to take place in. As suggested earlier by Blackmore et al. (2014), the lack of awareness in these security considerations could lead clinicians to practice online without the necessary safety measures in place putting their clients and therapeutic alliance at risk.

### **2.7.6. Practical considerations: Ethical considerations**

Furthermore, Anthony et al. (2014) issue caution as to the need for therapists to consider their physical, territorial boundaries, and how those are communicated transparently to the client. Clinicians might find themselves legally exposed in cases where they need to justify their professional decisions unless their insurance and licence policies cover them to practice in the client's country of residence. Some clinicians falsely seem to believe that because online therapy takes place in cyberspace should not be bound to state laws and limitations (Cipolletta & Mocellin, 2016). In reality, however, different licensure laws and insurance policies apply in different countries, which means that one can be qualified to work in one country, but not in another.

A practical implication of this consideration would be, for instance, when a long-term (offline) client, of a given clinician, moved to another country and wanted to continue working with the same therapist. The therapist being confident in using technology, and due to the potential monetary incentive could be misled assuming that they could continue seeing this client online (see also Blackmore et al., 2014; Harrad & Banks, 2015). It is another question, however, whether this decision would be ethically and legally sound. Anthony et al. (2014) suggest that, if this therapist was oblivious to the current ethical considerations, they might take on online clients, without adequate preparation, putting themselves and their client in risky and potentially legally compromised situations.

In addition, therapists must be able to manage their own data online and draw their own boundaries when it comes to infringements of clinician's information by the client (Balick, 2018; Francis-Smith, 2014). How this issue could manifest itself is easy to see through the example of a Facebook friendship request or stalking which are common behaviours that people tend to engage in while using SNS (e.g. Orchard et al., 2014). Clients

may be tempted to send their therapist a friendship request or look them up on social media, seeking information that might not have been intended to be seen by a client. The unexpected rejection of such a request could be perceived by the client as a personal rejection and might lead the client to be more inclined to drop out of therapy.

On this basis, it can be said that the therapist needs to know how to allow these behaviours to be integrated and blended (e.g. Wentzel et al., 2016) into the therapeutic alliance and help the client process and contain those in therapy (Balick, 2018). Anthony et al. (2014) suggest that sharing a digital and privacy policy with clients can help better manage associated boundaries and contain the therapeutic process. A document of this type could be used, therefore, to inform a client of their therapist's online boundaries as to social media interactions, time availability and other associated areas of contracting. As suggested earlier, these issues have been identified by Francis-Smith (2014) to raise clinician's uncertainty as to their perceived competence using cyberspace effectively for therapeutic alliance purposes. Associated key considerations are expected therefore to alleviate some of that uncertainty in clinicians enabling them to address these issues in more credible and competent ways.

On a similar note, therapists hold a responsibility to be professionally verifiable, being able to prove their qualifications, skills and knowledge in online therapy. In the absence of an officially recognised quality audit procedure in online therapy, this responsibility falls under the online supervisor's duties (e.g. Weitz, 2014). Online supervision is viewed; therefore, as a key clinical process which ensures that online interventions, which are utilised by the therapist, are viable and contained genuinely within their scope of expertise. To this effect, Drozd et al. (2016) suggest that online supervision with an experienced online clinician can also contribute notably to the therapist's skills development.



Concluding the current section, Tim Bond (in Weitz, 2014, p.206) would say that the current ethical considerations mirror the need for ethical practice both offline and online. It may be said, therefore, that the online therapists hold an ethical responsibility to adhere to existing professional body recommendations (e.g. ACTO, BACP) for specialist training requirements. This way, they will ensure they are familiarised with key ethical and legal guidelines, also improving their ability to recognise how those are manifested in practice and how they should be managed according to the client's best interest. According to the current thesis and the line taken in the present literature review, clinicians' awareness of the thus far reviewed key considerations could be associated with recommended applications thereof.

## **2.8. Towards a unique contribution to the literature**

With the range of AKCOT, motivational factors and OOTUA defining premises fully reviewed, the current chapter can now proceed to its final section outlining the intended unique contribution, of the current thesis project, to the literature. A key question raised in this respect is as to why existing online therapy regulations are not implemented sufficiently or enforced universally, so that better provision of online therapy practices could be facilitated. The current thesis has identified AKCOT and motivation as central clinician-related factors that could lead to a more consistent implementation of key online therapy practices, and contribute to the development of better therapeutic alliance online and the reduction of client dropout rates (Alfonsson, et al., 2016; Dunn, 2014; Edmonds et al., 2018; Feijt et al., 2018; Harris & Birnbaum, 2015; Vis et al., 2018). On this basis, the current body of work seeks to evaluate clinician's *awareness of key considerations in online therapy* (AKCOT) and motivations as potential predictors towards (*outcome*) *online therapy uses and applications* (OOTUA). This exploration is designed to contribute more empirical data in the emerging area of online therapy with an overall aim to promote a unique and wider understanding of the theoretical, practical and research basis on which future studies could

build upon. It is not intended to provide conclusive findings rather an empirical impetus for an informed debate as to research and practice-based future directions in online therapy.

According to Vis et al. (2018), whose work is informed by the implementation science framework, empirical evidence is necessary for the promotion and the implementation of key literature and research-driven recommendations in routine practice (see also Nilsen, 2015). As such, the implementation science framework appears to be well-suited in providing a basis upon which the question raised earlier, as to the currently limited implementation of key online therapy considerations, could be addressed in the current body of work. The domain of 'implementation science' is defined as the scientific paradigm that addresses the systematic uptake of evidence-based and research-guided recommendations into routine practice to improve the quality and effectiveness of health services and care (Nilsen, 2015). It is grounded in three areas of concern with the following objectives: 1) to guide the process of translating research into practice, 2) to understand and explain what factors influence the outcomes of any given implementation; and 3) to evaluate implementation. The current thesis project sits, therefore, between the first and the second area of concern of the implementation model as it sets out to provide an added insight and empirical data as to the factors underpinning the effective implementation of key theoretical and practical considerations in online therapy. The empirical paradigm, as underpinned by implementation science, is expected to provide a basis for this project to achieve its aims and attend to the need for more empirical and practice-based explorations in the area of online therapy (e.g. Richards et al., 2018 ).

Reinforcing the rationale for the underpinning framework of this thesis (as outlined above) it is noted that, the empirical paradigm is also relied upon by a wide range of applied psychological services. As such, it is widely used in forming practical recommendations of practice, future research and the gradual shift of paradigms across different sectors and

domains of practice. A representative example is that of the guidelines developed by the National Institute of Clinical Excellence (e.g. NICE, 2011) which, are based on empirical evidence and, currently guide psychological practice in the national health system in the UK. On this basis, the decision to adopt the empirical paradigm, as dictated by implementation science principles, not only offers a well-suited framework for the better attainment of the aims of this project but it is also linked to the wider trends within the landscape of psychological therapies, where the current thesis is located in.

As such, results deriving from this exploration could improve the empirical understanding as to what drives (at least partially) clinicians' provision of online therapy applications. This understanding could promote future discussion, and research, to facilitate better applications of online therapy through client engagement, reduced dropouts and better reach-out through online interventions. In accordance with Trafford and Lethem (2008), these axes of exploration denote the present thesis' unique contribution to the literature and underpin its practical implications to the field of psychotherapeutic and counselling psychology. With the focus and framework of the present thesis outlined, this chapter can now identify the main research questions of the current thesis.

## **2.9. Current Study**

The current work assesses the predictive ability of mental health clinicians' *awareness of key considerations in online therapy* (AKCOT) against the corresponding outcome online therapy uses and applications (OOTUA). The present thesis accepts that key considerations associated with *diversity of online communication, online disinhibition, cyber-therapy theory, ethical dilemmas, online security* and *specialist online therapy training* would significantly predict the practical use and application thereof. In addition, literature indicates that therapists might not always be sufficiently prepared to work therapeutically online, and yet they might do so depending on their motivations (Blackmore et al., 2014;

Harrad & Banks, 2015; Hennemann et al., 2017; Perle et al., 2013). Using the self-determination framework, it is proposed that clinicians' motivation using online therapy may be explained by intrinsic (such as enjoyment and interest in using online therapy) (e.g. Deci & Ryan, 2000; Feijt et al., 2018) and extrinsic motivators (such as stigma attributions, monetary gains) (e.g. Corrigan et al., 2013; Mallen et al., 2005a); and perceived competence in working online (e.g. Feijt et al., 2018; Wilson et al., 2013). As such, the current thesis expects that the current motivational aspects will have some significant predictive effect on the use and applications of online therapy key considerations. Appendix A includes the full ethics application and approval for the current project as summarised here.

As can be seen in Appendix A, the current thesis had initially proposed to explore the present factors using moderation and mediation analysis. As shall be seen in chapter two, that design was deemed unattainable due to unforeseen sampling limitations. A decision was made for the current project's design to be adapted to a less resource-demanding design of regression analysis. Based on these adaptations, the following research questions are formulated: 1) Which of the *outcome online therapy use and applications* (OOTUA) factors will be significantly predicted by each of the individual factors of *awareness of key considerations in online therapy* (AKCOT), and 2) Which of the OOTUA factors will be significantly predicted by each of the individual factors of motivation.

### **3. Chapter three. Study one: Questionnaire development**

#### **3.1. Introduction**

The preceding literature review indicated that clinicians' therapeutic skills and abilities in establishing a good therapeutic alliance online could be related to the degree to which key considerations in online therapy are implemented in routine practice (e.g. Feijt et al., 2018; Vis et al., 2018). It was also highlighted that clinicians' concerns or hesitation in up-taking online therapies could be rooted in a potentially limited understanding and awareness as to the potential uses and theoretical applications of cyberspace in mental healthcare (e.g. Hennemann et al., 2017). On this basis, the present study puts forward that the degree to which clinicians are aware of key online therapy theoretical and practical considerations could be associated with the endorsement of corresponding uses and applications in routine practice. The current study aims to preliminary assess the properties of and finalise a range of research scales measuring clinicians' awareness and uptake of key online therapy considerations (AKCOT and OOTUA); and a series of motivational factor scales, such as perceived competence, intrinsic, extrinsic motivation and stigma attributions. This work serves as preparatory ahead of the main study and data collection, which will follow in the next phases of this thesis project.

##### **3.1.1. Practical considerations of study one**

The present study (study one) had initially faced a low participation rate which limited the available options regarding the potential analysis strategy that could be used. Over a three-month period, only 19 out of 150 participants who started the questionnaire, completed it. There are a number of possible reasons as to why there was such a high dropout rate for this study. Verbal feedback was provided by a handful of participants as to the length of the questionnaire. They suggested it was too long, and participants were likely losing

interest. Secondly, due to the lack of professional regulatory clarity in the area of online therapy, as to what is considered viable and non-viable online practice, some clinicians may have been hesitant to speaking openly about their online practice. Similar participation concerns have surfaced in other studies such as Hennemann et al. (2017) and IJzerman (2017). An additional speculation as to the reduced participation suggests that some participants, who did not meet the stringent selection criteria, may have thought that they did not have the full year of online therapy experience required for their participation. In line with Thabane et al. (2010), study one was rendered a preliminary study with a view to addressing the hereby concerns, so that success of the main study (study two in Chapter three) could be ensured.

To this effect, it has been considered appropriate to use an exploratory method to reconsider the study methodology rather than to persist in trying to recruit the number of participants required to complete the overly long initial study questionnaire. Study one includes a series of reliability analysis and goodness of fit tests followed by a series of simple linear regression analysis and power calculations. These are aimed to ascertain the usefulness of all the current questionnaire scales. It is acknowledged that the current study's sample size of 19 participants is too small for sensible regression analysis as outlined by Stevens (2002), who suggests that at least 8 to 15 participants are required for each predictor in a model of regression. The size of the present sample, however, was not intended to provide meaningful regression analysis results (e.g. Green, 1991; Stevens, 2002). Rather, it was essential to assess the effectiveness of the questionnaire, so that its item content could be reduced to promote a better participant uptake. Study one, therefore, was aimed at identifying and removing any factors that were showing no statistical likelihood of contributing significantly to a final model of predictors.

### 3.2. Participants

Nineteen participants (13 Female, 5 Male and 1 identifying as Transgender) aged 36-66 years ( $M= 50.28$ ,  $SD= 9.36$ ) took part in this study. Six identified as psychologists, 11 as therapists or counsellors and 1 as a mental health nurse. They were required to have at least one year of experience of online practice and be UK-based for participation. In terms of highest level of academic achievement, qualifications included 4 doctorates, 7 masters level degrees, 5 diplomas and 2 non-specified qualifications. A total of 13 participants were registered with an offline psychology-related body such as BACP, 1 with an online body such as the ACTO and 5 reported dual memberships. Participants' online therapy experience ranged from 1 -12 years ( $M= 4.39$   $SD=3.20$ ) with offline therapy experience ranging between 2-32 years ( $M= 13.22$   $SD=7.36$ ). Refer to Appendix C for summary tables of these and additional demographic information that was collected but not used in the current analysis. It is noted that the current thesis chose not to remain limited in recruiting only psychologists because online support is usually delivered by a range of professionals and in various clinical settings (e.g. Richards & Richardson, 2012).

### 3.3. Design

The present study adopted a series of simple linear regression analysis. There were two clusters of predictor factors: *awareness of key considerations in online therapy* (AKCOT) and motivation factors. The cluster of AKCOT measured participants awareness of key literature considerations using five distinct purpose-built scales corresponding to five aspects of online therapy: *online disinhibition* and *cyber-therapy theoretical considerations*, *ethical* and *security considerations*; and *online therapy training requirements*. The cluster of motivation factors included three self-determination constructs which measured *intrinsic motivation*, *perceived competence* and *general causality orientation*; as well as attributional

style constructs which measured the following three behavioural dimensions: *personal responsibility attribution as to mental illness, affect and behavioural response*.

There was one main cluster of outcome factors, *outcome online therapy uses and applications* (OOTUA). This cluster measured online therapy applications using five distinct purpose-built scales corresponding to the five aspects of online therapy: *online disinhibition, cyber-therapy applications, ethical and security applications, and training engagement*. The OOTUA cluster also measured two additional aspects of online therapy applications: *diversity of online modes of communication and diversity of online security methods* using two distinct purpose-built frequency items. Figures 3.1 and 3.2 present the methodological design regarding the main clusters of predictor and outcome factors.



Figure 3.1: AKCOT predictors x OOTUA Factors.

*Predictor factors*

*Awareness of key considerations online therapy (AKCOT)*

*Outcome factors-OOTUA:*

*Online therapy usage and applications scale(s) and Frequency question item(s) (FQI)*

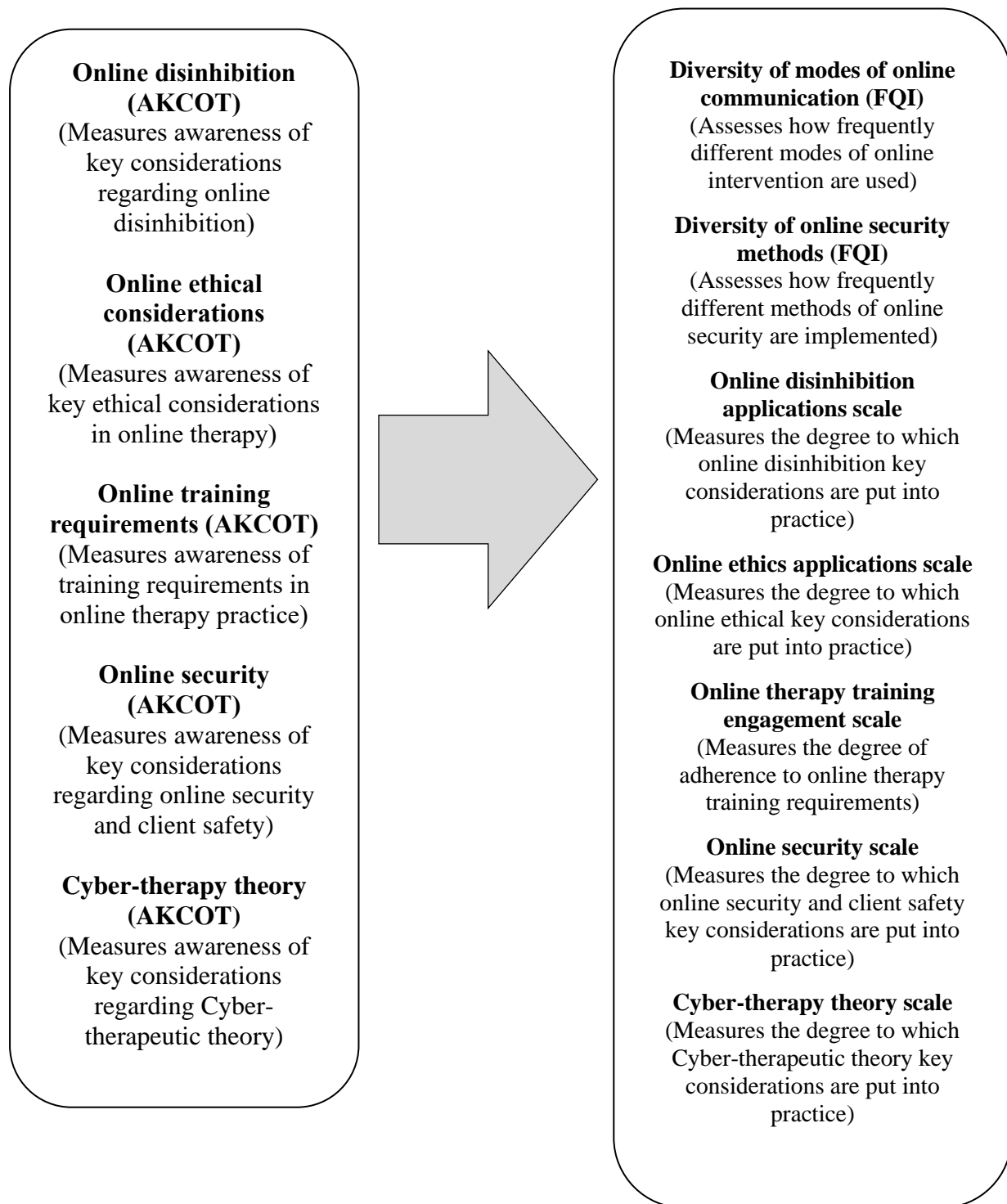


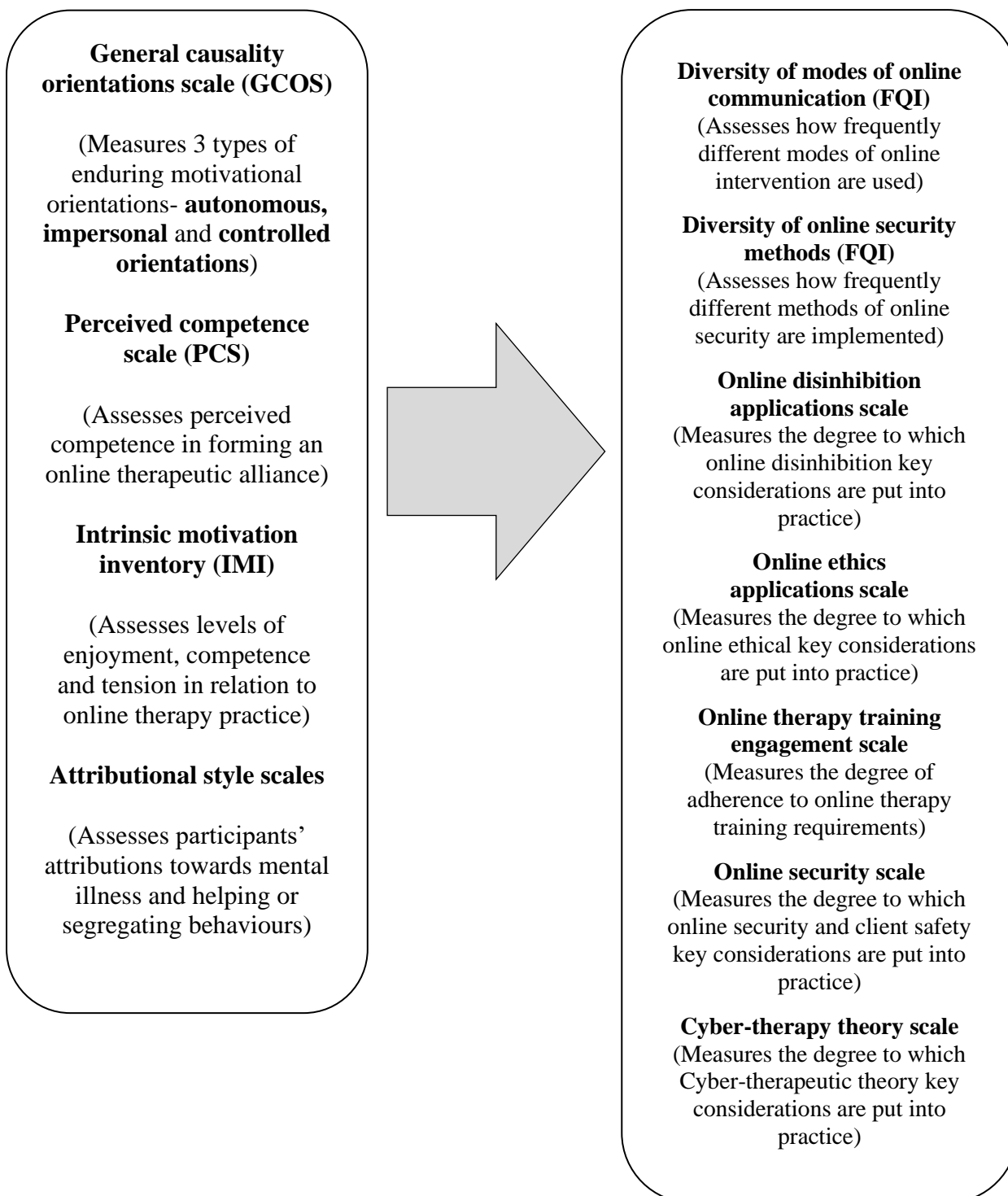
Figure 3.2: Motivation predictors x OOTUA Factors.

*Predictor factors*

*Motivation factors*

*Outcome factors- OOTUA:*

*Online therapy usage and applications scale(s) and Frequency question item(s) (FQI)*



### **3.4. Materials**

#### **3.4.1. Predictor Factors**

##### ***3.4.1.1. Awareness of Key Considerations in Online Therapy***

Literature indicates that clinicians' awareness of online therapy key theoretical and practical considerations might relate to the application thereof (e.g. Feijt et al., 2018). To assess clinicians' *awareness of key considerations in online therapy* (AKCOT), five 3-item scales were devised specifically for this project, as attempts to source an existing, suitable measure were proven unsuccessful. At the time of writing there were a few scales measuring generic online health uses such as eHealth Literacy Scale (eHEALS) (Shaw & Shaw, 2006); and its refined versions eHealth Literacy Questionnaire (eHLQ) and eHealth Literacy Assessment (eHLA). These, however, were deemed to be too generic for the specific purposes of this study. They could not capture the subtle and specific therapeutic considerations the current work was interested in, therefore were considered non-suitable. Researchers who have measured similar constructs to AKCOT previously, have used brief scales which were made of statements drawn from the literature (e.g. Cipolletta & Mocellin, 2016; Donovan et al., 2015; Hennemann et al., 2017; Wangberg, Gammon & Spitznogle, 2007). Others used single items asking participants to rate their levels of perceived knowledge in certain areas of practice (e.g. Wilson et al., 2013).

Cipolletta and Mocellin's (2016) study was used as a reference point, guiding the process of devising the AKCOT scales. This study was chosen because its main concern was closely relevant to the issues being explored in the current project. These researchers asked clinician-participants to rate their degree of agreement on a series of statements, which represented a total of 15 aspects of online therapy (such as accessibility, economic, theoretical, psychological aspects, ethical and deontological aspects, legal and normative aspects, security and privacy issues). The approach of drawing statements from the literature

to produce scale-items is also seen in Hennemann et al. (2017) who devised their own scales to measure participants' knowledge of eHealth advantages and disadvantages. A decision was made not to use Cipolletta and Mocellin's (2016) exact items in the current study; however, for the following three reasons. Firstly, those statements were worded with the Italian normative context and local psychological norms in mind. Therefore, it was unclear how they would perform within the UK context. Secondly, these researchers did not specify how many items corresponded specifically to each online therapy aspect, making it difficult to determine which of those might be relevant to the aspects of interest in the current work. Finally, no reliability values or expected validity were reported as to those statements making it impossible to gauge their psychometric properties in advance.

To develop the AKCOT scales, existing literature was reviewed and cross-referenced with Cipolletta and Mocellin's (2016) and Weitz's (2014, p. 152) work resulting in the five most often reoccurring online therapy aspects, which eventually formed the basis of the current AKCOT scales: *online disinhibition*, *online cyber-therapy theory*, *online ethics*, *online security* and *online training recommendations*. The exact statement-items corresponding to each of these aspects were drawn from the following academic resources Barak (2008), Cipolletta and Mocellin's (2016); Finn and Barak (2010), Harris and Birnbaum (2015), Mallen et al. (2005a) Rummell and Joyce, (2010), Suler, (2016). In their totality, all five AKCOT scales consisted of 15 Likert type items. Each scale has three items measuring from 1 (*strongly disagree* or *definitely not*) to 5 (*strongly agree* or *definitely yes*). Reverse-scored items were occasionally included in some of the subscales to control for socially and professionally desirable response biases such as acquiescence (Carlson et al., 2011). The full questionnaire is included in Appendix D. Participant's scores on each subscale were averaged with high scores representing a more in-depth awareness of relevant issues.

Examples of the items included in each subscale are as follows:

AKCOT-online disinhibition, 3 items (Cronbach's alpha= .70) such as:

*“In the context of online therapy, specific to the cyberspace psychological mechanisms have been evidenced to encourage the expression of one's true or real self”.*

AKCOT-online ethics, 3 items (Cronbach's alpha=.236) such as:

*“One of the advantages of online therapy is that it is possible for therapists to connect with clients from anywhere in the world. For this reason, online therapy services should not be bound/limited to state or country licence regulations when practicing online”.*

AKCOT-training requirements, 3 items, (Cronbach's alpha=.817) such as:

*“It is argued that FtF therapeutic skills are transferable and sufficient for one to provide online therapy services. For this reason, online practitioners can practice with no additional preparation and training as to their selected areas of online work”.*

AKCOT-online security, 3 items, (Cronbach's alpha=.371) such as:

*“Online therapy literature indicates that clients who pose a danger to themselves or others may not be good candidates for online therapy. This caution applies to a range of possible clients, including serious substance abusers and clients presenting psychotic or actively suicidal concerns”.*

AKCOT-cyber-therapy theory, 3 items (Cronbach's alpha=.542) such as:

*“According to psychological theory and cyberspace communication literature: Several psychological factors that normally does not exist in offline interactions seem to operate in cyberspace and have a great impact on the client's/patient's behaviour”.*

Before proceeding further, it is important to highlight the underpinning contextual parameters that influenced the decisions made throughout the process of devising the

AKCOT scales. Firstly, to balance the number of items in the scales against administrative costs, it was decided that each AKCOT scale would include no more than three items. This decision was made based on Eisinga, Te Grotenhuis and Pelzer (2013) and Robinson, Shaver and Wrightsman (1991) who suggest that 2-item or even 1-item scales can be adequate in measuring levels of opinions towards a given construct. This recommendation was relevant to the current scales which sought to measure participants' opinions on a set of statements, as opposed to assessing their scores on a complex and subtle construct, which would typically require a long list of items (such as anxiety). This decision is not ideal, and it has its shortcomings, however, its main advantage refers to its resource efficacy in collecting data, in a limited amount of time and from a hard-to-reach population (Eisinga et al., 2013); which represented some of the contextual constraints faced by the current project.

Similarly, repeated rounds of data collection and large numbers of participants are generally accessible (within a time-limited thesis project) when collecting data from the general population, where expertise requirements do not apply. Considering the niche and hard-to-reach population of the current work, the development of the AKCOT scales as well as the research analysis were confined within one round of data collection. On this basis, the reliability of the AKCOT scales would be determined based on Foster and Parker's (1995, p. 95) recommendations on building a scale that measures opinions against a set of statements. These authors suggest that the final items in a questionnaire of this type can be selected through the item homogeneity process, otherwise known as Cronbach's alpha reliability analysis. This approach can be used post-data-collection and is cited by Foster and Parker (1995) to be equally effective as typically used pilot procedures (such as the index of discriminatory power). As such, it was deemed acceptable to pursue only one round of data collection, omitting a preliminary pilot phase. It is recognised, however, that by omitting a pilot phase, the development of the current scales would not lend itself to preliminary

construct validation, usually supported by expert focus groups. This issue was addressed by ensuring that all items in the current scales were drawn from and cross referenced between scientific works published by leading researchers in the field of online therapy (as cited above). In addition, the participants of this study would have been educated professionals at the post-graduate level, so it was expected that the wording of the selected items would be comprehensible to them.

#### **3.4.1.2. Motivation Scales: General Causality Orientations Scale**

The *General Causality Orientation Scale* (GCOS) (e.g. Deci & Ryan, 2000; 2002) assessed whether each of the three enduring, personal motivational orientations, *autonomy*, *impersonal* and *controlled orientation* would have a relationship with clinicians' use and application of online therapy key considerations. *Autonomy* refers to the extent to which an individual is drawn toward aspects of the environment that stimulate intrinsic motivation, provide informational feedback and are optimally challenging. *Impersonal orientation* refers to the extent to which one believes that their achievements are beyond their control and a matter of luck. *Controlled orientation*, (otherwise referred to as extrinsic motivation) refers to the degree to which an individual's behaviour is oriented to being controlled by external rewards (such as monetary gains), ego-involvements (such as pride of performance), and the directives of others (Deci & Ryan, 2000; 2002). Each orientation was measured on a 12-item scale ranging from 1 (*extremely unlikely*) to 7 (*extremely likely*). The overall GCOS was developed by Deci and Ryan (1985a) and includes 12 small vignettes depicting life or social situations such as:

*'You have been offered a new position in a company where you have worked for some time. The first question that is likely to come to mind is...'*

Each vignette has three potential responses, one of which corresponds to an autonomous reaction: *'I wonder if the new work will be interesting'*; an impersonal reaction:

‘*What if I can't live up to the new responsibility?*’ and a controlled-type reaction: ‘*Will I make more at this position?*’. Participants’ scores on each scale were averaged, with high scores representing high levels of each orientation. Original Cronbach’s alpha scores are reported by Deci and Ryan (1985) as follows Autonomy=.74, Impersonal=.74 and Controlled=.69. The reliability scores for their use in this study are discussed in the analysis section of this chapter.

#### **3.4.1.3. Motivation Scales: Intrinsic Motivation Inventory (IMI)**

Different versions of the intrinsic motivation inventory (Ryan, 1982) can be found throughout the literature, ranging from the inclusion of nine to 45 items (Ryan, Connell, & Plant, 1990; Deci et al., 1994). For this study, the 9-item version was used to explore the relationship between intrinsic motivation and clinicians’ use and application of online therapy. Participants were asked to read a text excerpt from Šendula-JengiĆ et al. (2016), which discussed future applications of virtual reality in online therapy (Appendix D). The choice of the above-cited excerpt was based on self-determination theory (SDT) which indicates that intrinsically motivated individuals would seek to grow their expertise in online therapies by seeking newly developed online therapy techniques which could challenge them and provide them with informational feedback and potential for growth. In this respect, Šendula-JengiĆ et al.’s take on virtual reality was deemed interesting to read about fulfilling the key premises of the IMI. Additionally, the excerpt was also not related directly to the study, to avoid it encouraging a confounding effect on the overall results.

Subsequently, they completed a self-reported inventory consisting of three subscales, measuring from 1 (*strongly disagree*) to 7 (*strongly agree*).

Interest/enjoyment is measured using 5 items such as, *I enjoyed reading this material very much*.



Pressure/tension was measured by 2 items such as, *I felt very tense while reading this material.*

Perceived Competence was measured using 2 items such as, *I think I understood this material pretty well.*

The scores of the nine items were averaged all together, and high scores represented high levels of intrinsic motivation. Deci and Ryan (2000) cite McAuley, Duncan, and Tammen's (1989) Cronbach's alpha indicative reliabilities of the IMI subscales as follows: Interest/Enjoyment=.78, Perceived competence=.80 and Pressure/Tension=.68. Deci and Ryan explain that due to the straightforward nature of its question items, all versions of the IMI tend to maintain their validity and reliability levels across different research conditions, tasks and settings. They note, however, that ego-involved or performance-related tasks (such as solving a puzzle instead of reading a text) could exert an external effect on the IMI scores if they remained uncontrolled. Conversely, in this study's context, participants were only required to read the text material and respond to the IMI questions based on their individual experience, without assessment of any performance or comparison measures (such as how fast one completed the questionnaire). On this basis, no control excerpt was used in this study as there was no reason to believe the IMI's reliability was threatened.

#### **3.4.1.4. Motivation scales: Perceived competence scale (PCS)**

The perceived competence scale (PCS) (e.g. Williams, Freedman & Deci, 1998) is a 4-item scale measured from 1 (*extremely untrue*) to 7 (*extremely true*) and assesses participants' sense of perceived competence in respect to a domain or activity. The PCS was aimed at exploring the potential existence of a relationship between clinicians' perceived competence in forming and maintaining an online therapeutic alliance and their use and applications of online therapy. Participants' scores on all four items of the scale were

averaged with high scores reflecting high levels of perceived competence. PCS is cited as one of the most valid and reliable instruments within self-determination theory, with an original Cronbach's  $\alpha=.90$  (Williams, Freedman, & Deci, 1998). The wording of the original PCS was related to a healthy diet and was therefore adapted to refer to clinicians' perceived competence in forming an online therapeutic alliance. For example, the statement "*I feel confident in my ability to maintain a healthy diet*" was reworded to "*I feel confident in my ability to maintain an effective online therapeutic alliance*". Deci and Ryan (2000) suggest that PCS items are written in such a way that they can maintain their validity when adopted across the different specific behaviours or domains of each study.

#### **3.4.1.5. Attributional style questionnaires and vignettes**

The instrument for this factor included two vignettes and two 10-item questionnaires (A & B) that were presented after each of the vignettes with the aim of assessing whether attributional style towards mental illness would be related to clinicians' uses and applications of online therapy. The two vignettes were adopted from Corrigan et al.'s (2003) work, each describing a middle-aged man suffering from a diagnosed mental health condition. Vignette A depicted Harry, a 30-year-old suffering from schizophrenia, and Vignette B depicted Steve, a 32-year-old man suffering from schizo-affective disorder (Appendix D). Each vignette included differing information about the *controllability of cause* of the mental illness.

Vignette A, included the level of *uncontrollable cause* by the statement: '*Harry's mental illness was originally caused by a severe head injury suffered during a car accident when he was 22 years old*'. Vignette B included a *controllable cause* by stating "*Steven's mental illness was originally caused by eight years of abusing illegal drugs.*" Vignette A corresponded to questionnaire A and the subscales *personal responsibility beliefs, feelings of pity, and helping behaviours*. Vignette B corresponded to questionnaire B and the subscales *personal responsibility beliefs, feelings of anger and coercion/segregation behaviours*. These

scales are aimed to measure how attributions of a mental health condition, to a controllable or uncontrollable cause, could lead to helping or discriminative behaviours against the person suffering from the condition.

Each of the two questionnaires included three sub-scales that are measured from 1 (*extremely unlikely or not at all*) to 9 (*extremely likely or absolutely certain*). Questionnaire A sub-scales: *Personal responsibility Beliefs* (Cronbach's alpha=.70) is measured with three items such as "*I would think that it was Harry's own fault that he is in the present condition*". *Pity* (Cronbach's alpha=.74) is measured with 3 items such as "*I would feel pity for Harry*". *Helping Behaviours* (Cronbach's alpha=.88) is measured with 4 items such as "*If I were an employer, I would interview Harry for a job*". Questionnaire B sub-scales: *personal responsibility beliefs* (Cronbach's alpha=.70) is measured with 3 items such as "*I would think that it was Steven's own fault that he is in the present condition*". *Anger* (Cronbach's alpha=.89) is measured with 3 items such as *I would feel aggravated by Steven*. *Coercion/ Segregation behaviours* (Cronbach's alpha=.89) is measured with 4 items such as *I think it would be best for Steven's community if he was put away in a psychiatric hospital*.

### **3.4.2. Outcome Factors-OOTUA**

#### **3.4.2.1. Outcome Online Therapy Usage and Applications**

To assess the relationship between AKCOT and practical applications thereof a series of scales were devised specifically to measure the factors of *outcome online therapy usage and applications* (OOTUA). The OOTUA scales were developed by the same process and were mapped onto the aspects measured by the corresponding AKCOT predictor factors. This provided a logical structure of investigation which could focus specifically on assessing whether the link between AKCOT and OOTUA is statistically significant and whether AKCOT predicts the use and applications of the associated OOTUA aspects in routine

practice. The OOTUA scales consisted of 13 items divided into five subscales, *disinhibition applications, cyber-therapy applications, ethical, online security applications* and *online therapy training engagement*; measuring from 1 (*strongly disagree or definitely not*) to 5 (*strongly agree or definitely yes*). High mean scores, in each scale, represented high levels of use and application of each OOTUA factor. To ensure consistency, all OOTUA items were adopted from the same literature used to create the AKCOT scales (see Appendix D for full questionnaire).

Examples of the items included in each subscale are as follows:

OOTUA-disinhibition applications, 3 items such as:

*“Based on my so far online clinical experience, I believe that it is hard to base a client's/patient's emotional assessment on text-based communication as the risk of errors in clinical assessments can be increased.”*

OOTUA-ethical applications, 3 items, such as:

*“It is arguable whether an online practitioner can deliver mental health services only in the country/ territory in which he or she holds a professional license. It is understandable that some online practitioners choose otherwise. To what extent would you consider broadening the scope of your online practice, without obtaining a license in neighbouring countries/territories.”*

OOTUA-online security applications were measured with 2 Likert type items such as:

*“It is my preferred practice always to know the identity of any client that I work within an online setting and be aware of emergency services in the client's area”,*

and one categorical item regarding clinicians' preferred mode of receiving clinical supervision for their routine online practice.

OOTUA-cyber-therapy applications, 2 items: one Likert item:

*“My online therapy practice always takes place in a context with a variety of resources available. Links to informational websites, video clips, documents, and assessment tools are readily available via all online therapy modalities;*

Also, one rank order categorical item was included in this scale asking participants to rank three definitions of online therapy by dragging the definition that described their views best to the top and the one that described them the least the bottom of the list.

OOTUA-training engagement, 2 items: one Likert item:

*“It is generally acknowledged that many online therapists have had very little or no training in the online medium. To what extent do you agree with the statement: 'Online Professionals should have formal online therapy training.'”*

Also, one text-entry item asked participants to write any type of training they had attended that contributed to the development of their online skills. After data collection this item was transformed into a Likert item, coded as follows: A score of 1 equated for *no relevant online training*, 3 equated for *relevant online training up to certificate level*, and 5 equated to *diploma/ or above in online therapy*. In line with Mallen et al. (2005), *relevant online training* was defined as any type of training or continual professional activity that included theoretical or skills-based exposure to CMC or other online therapy technologies.

#### **3.4.2.1.1. The social desirability threat and wording of the items**

The OOTUA questionnaire was created by combining rank order, text-entry and Likert items with the aim of controlling for professional identity bias and social desirability effects inherent to the clinician-based sample of the study. Bradburn, Sudman and Wansink (2004) suggest that an effective way of dealing with these threats would be to include question items of various types so that potential biases can be filtered-out and potential over-statement of practical applications can be reduced. It is also noted that all items (both in

AKCOT and OOTUA scales) were introduced by such statements to reduce the threat of a potential social desirability effect (see Bradburn et al., 2004).

It is also clarified that both OOTUA and AKCOT questionnaires revolve around the same online therapy key considerations but differ as to their approach towards those. AKCOT was framed to capture clinicians' level of awareness as to the existence of the key online therapy considerations under investigation. Whereas, OOTUA was designed to capture clinicians' practice-based experience of actually having put into practice the key online therapy considerations in question. This provided the basis for the main hypotheses, of this project, to be investigated enabling a research design which could lead to assertions as to whether online therapy key considerations tend to be put through into practice. As such, OOTUA items were derived from practical recommendations for practice from previous literature, so their wording reflects practical applications and uses of the key considerations of online therapy at hand (see section 3.4.2.1). The AKCOT items, however, were derived from existing literature that simply highlighted the need for raising clinicians' awareness as to those online therapy considerations (see section 3.4.1.1).

#### **3.4.2.2. *Outcome factors: OOTUA-frequency variables, diversity of modes of online communication and diversity of online security methods.***

To measure the degree to which a multi-modal array of CMC and online security tools were employed by the participants, two frequency question-items were devised: 1) participants indicated from a list of 22 different modes of online communication (e.g. smartphone video, email, text messaging) which ones they had used over the last six months; 2) participants indicated from a list of 10 methods of online security (for example, password protected and/or encrypted client-therapist email system, end-to-end encrypted video-conferencing) which ones they had used over the last six months. The higher the number of

methods chosen by each participant, the greater the diversity of modes of communication or security methods implemented. The list of choices for both questions was inspired by Barak (2008), Finn and Barak (2010), Rummell and Joyce, (2010), Cipolletta and Mocellin (2016), and professional conduct guidance documents published by ACTO (2009) and BACP (2015). Due to the extensive options for online-based communication available to clinicians, and their variations in levels of synchronicity and technological hardware or software, it was important that both of these frequency items included an extensive list of options. This maximised the likelihood that participants could locate the modes of communication and security methods they might have used.

#### **3.4.2.3. Categorical control variables and demographic questions**

A series of categorical and text-entry question items were used with the aim of providing descriptive data on a range of potential external factors that could have a confounding effect on the outcome factors, these are shown in Appendix A. The items used in this section of the survey were identified from the same literature used to devise the AKCOT and OOTUA questionnaires. Two question items were also included in this section to assess the participants' personal experiences of familiarity with mental illness. This complied with Corrigan et al. 's (2003) guidance as to the use of the attributional style questionnaire. Additionally, participants were asked to provide demographic information on their age, gender identity, professional title, highest academic achievement, membership with online and offline professional bodies, and their offline and online clinical experience. These were collected for descriptive purposes, and none provided identifying information.

### **3.5. Procedure**

Recruitment invitations were distributed (using email, social media posts and invitation leaflets) via known professional contacts, listed professional organisations, online therapy social media sites and counselling directories. Where necessary, permission to advertise was sought from group or company administrators via private message, email or telephone calls prior to sharing the link. Concerning online directories, only individuals who had not explicitly denied unwarranted emails and maintained a public online website with an individual and publicly available email address were invited to take part. In line with the snowball sampling method (Smith, 2012), coordinators of online social media and offline-based research and professional groups were contacted to take part and facilitate dissemination of the survey amongst their professional contacts. Individual clinicians were contacted via email or generic posts on social media platforms. Each potential participant was prompted to forward the research invitation to other potential participants. Participation in this study was thus anonymous and voluntary, and no reward for participation was offered.

A distribution link was generated via Qualtrics where the online survey was hosted. Research information pertaining to the study was located on the landing page of the online survey and provided all the necessary information for informed consent to be given before participation. At this point, it was also explained that Qualtrics would automatically record participants' IP addresses to control for duplicate data cases. Since no identifying information was requested, participants could not be identified by their IP address alone. When the data were downloaded, IP addresses were considered to ensure there were no double entries and were then deleted.

The questionnaire structure was based on a fixed order. After the information sheet and consent page, participants completed the OOTUA scales and then the motivation scales



GCOS, IMI, PCS, followed by the attributional style scales, the AKCOT scales and finally the categorical control questions. The demographic items were presented at the end of the questionnaire, where according to Bradburn et al. (2004), they are less likely to foster response biases. Due to the length of the questionnaire, participants were given the option to save their responses and complete the questionnaire at a later date.

At the end of the survey, participants were explicitly notified that by clicking the final *next/submit* button, they would consent for their responses to be used for the data analysis. To preserve active consent throughout, and participants' right to withdraw from the study at any point, no incomplete responses were included in the data analysis. Participants were notified both at the beginning and end of the survey that due to the anonymity of the data, their data would not be able to be withdrawn from the data pool after clicking the final *next/submit* button. They were then thanked for their participation, given more information about the nature of the study and provided with emergency emotional support contacts and the researcher's contact details should they have wished to discuss their participation further. It was clarified that no individual feedback could be provided on participants' study performance (See Appendix D for landing page information and Appendix A for debriefing form and participation invitations).

### **3.6. Results**

As previously explained, given the small sample size acquired in this round of data, it was not feasible to conduct a moderation and mediation analysis as originally intended. That type of analysis requires a sample size in the region of 400-500 participants (e.g. Green, 1991). A decision was therefore made to redefine the methodological approach to adopt a regression analysis design, with a view to meeting the sample size demands of this approach (e.g. Green, 1991). The current results section is divided into two parts: Firstly, descriptive

statistics, Cronbach's alpha analysis and goodness of fit normality tests and normal distribution histograms are presented for both predictor and outcome factors with the aim of ascertaining which items to retain in the next phases of this work. The second part of this section presents a series of single linear regression and power calculation analysis. Both of these sections inform item retention for the next phase of this work.

### **3.6.1. Missing Values Analysis**

The raw data were screened, ensuring that responses corresponded to the expected range of values of each item. A total of 19 participants completed the survey, but a missing values patterns analysis identified only 15 fully completed cases. There were five quantitative missing values spread across four cases, with four demographics and four categorical values also missing. Tabulated patterns regarding the quantitative missing values indicated that the one rank-order item in *OOTUA-cyber-theory applications* had three missing values, accounting for 15.8% of the data. Due to its ordinal data nature, this item did not lend itself to missing data estimation analysis. Given that the totality of missing data was found to be missing completely at random (Little's MCAR test: Chi-Square= .000,  $df= 304$ , Sig.= 1.000), the complete case approach was employed which implied removing this item (Lin, 2010). It was indicated that deletion of this item would increase the fully complete cases from 15 to 17, leaving only two missing quantitative values in the totality of the dataset. Due to the limited sample size of this study ( $n=19$ ), the merit of deleting this item to obtain two additional complete cases outweighed the risks, and the item was deleted.

The patterns of the remaining two quantitative missing values were tabulated, and the estimated means, correlations, and covariances in relation to the rest of the dataset were calculated. These values were found to be missing completely at random (Little's MCAR test: Chi-Square= 1.309,  $df= 2$ , Sig.= .520), and therefore it was deemed acceptable for them to be

replaced through the expectation maximisation (EM) process. Lin (2010) indicates that EM is as accurate as any other imputation process, so it was adopted here due to its simplicity of application within the statistical package used for the rest of the current analysis, Statistical Package for Social Sciences (SPSS).

### **3.6.2. Descriptive statistics, reliability and normality analysis**

In line with Nunnally and Bernstein's (1994) recommendation for newly developed scales, a Cronbach's alpha = .70 or above was adopted as the minimum acceptable internal consistency value for each scale. Any subscales that achieved insufficient reliability (< .70) were examined further for their item-total correlations and normality of distribution before a decision could be made about their retention and suitability for the subsequent simple linear regression analysis. In line with existing literature, this statistical process was not the sole parameter influencing this decision. Structural integrity issues of the current study design were considered too, occasionally providing the basis for scales with coefficient alpha lower than .70 to be retained or improved through the item-deletion process (e.g. Dekovic, Janssens, & Gerris, 1991; Ferketich 1991). The rule of item-total correlations  $\geq .20$  was adopted as a guiding principle informing decisions of exclusion or retention of items in the pursuit of improved scale reliability (e.g. Clark & Watson, 1995; Ferketich 1991). Homogeneity of variance (reported as part of the regression analysis assumptions in section 3.6.5.1. and the normality of data distribution was also monitored to provide basic indications as to the structural properties of the data. Comparisons between the original reliability values and the current alpha values were possible and were considered in relation to the validated motivation scales employed in this chapter.

### 3.6.3. Predictor Factors

#### 3.6.3.1. Awareness of Key Considerations in Online Therapy (AKCOT)

Descriptive statistics and Cronbach's alpha analysis for the individual AKCOT scales of *online disinhibition*, *online therapy training requirements*, *online ethics*, *online security* and *online cyber-therapy theory* are presented in table 3.1.

Table 3.1: Descriptive statistics and Cronbach's alpha analysis for AKCOT scales.

	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean(SD)</i>	<i>Cronbach's alpha</i>
AKCOT-Online disinhibition(3-item)	19	2.33	5.00	3.68(.757)	.700 *
AKCOT-Online therapy training requirements(3-items)	19	2.00	5.00	4.05(1.02)	.817 *
AKCOT-Online ethics(3-item)	19	1.00	4.33	2.87(.81)	.236
AKCOT-Online security(3-items)	19	2.33	4.67	3.87(.61)	.371
AKCOT-Cyber-therapy theory (3-items)	19	2.00	4.67	3.92(.75)	.542

\*Sufficient reliability (Cronbach's alpha  $\geq$  .70)

Cronbach's alpha analysis for the scales of AKCOT-*online ethics*, *online security* and *online cyber-therapy theory* were repeated excluding any items that showed corrected item-total correlation  $<$  .20 (e.g. Clark & Watson, 1995; Ferketich 1991). Table 3.2 shows the corrected item-total scale correlation after the item removal.

Table 3.2: Cronbach's alpha, AKCOT-online ethics, AKCOT-online security and AKCOT-cyber-therapy knowledge. Highlighted items were removed due to poor internal consistency

	Corrected item-total scale correlation	Corrected item-total scale correlation after item removal
<b>AKCOT-Online ethics</b>		
Item 1	.363	.688
Item 2	.417	.688
<b>Item 3</b>	<b>-.232</b>	<b>-</b>
Total internal consistency	.236	.814*
<b>AKCOT-Online security</b>		
Item 1	.425	.383
Item 2	.274	.383
<b>Item 3</b>	<b>-.036</b>	
Total internal consistency	.371	.554
<b>AKCOT-Cyber-therapy theory</b>		
Item 1	.533	.510
Item 2	.435	.510
<b>Item 3</b>	<b>.149</b>	
Total internal consistency	.542	.675

\*Sufficient reliability (Cronbach's alpha  $\geq .70$ )

As shown in table 3.2, Cronbach's alpha scores for the 2-item AKCOT-online ethics scale was  $>.70$ . A Shapiro-Wilk test of normality indicated a normal distribution for the 2-item AKCOT-online ethics scale (Table 3.3 and Figure 3.3). This 2-item scale is retained and used in the subsequent regression analysis. It is noted that the Shapiro-Wilk test is chosen instead of the Kolmogorov-Smirnov test, as literature indicates that the latter is invalid and should only be considered for historical curiosity reasons (Royston, 1995).

Corrected Cronbach's alpha scores for the scales of AKCOT-online security and AKCOT-cyber-therapy theory indicated inadequate reliability (Table 3.2). Each of these scales (in their 3-item forms) were tested for a normal distribution using the Shapiro-Wilk test, which indicated non-normal distributions for both AKCOT-online security and AKCOT-cyber-therapy theory (Table 3.3). As shall be seen in the reliability section of the outcome factors (section 3.6.4 and Tables 3.9 and 3.10) the corresponding outcome factors of OOTUA-online security applications and cyber-therapy applications will also be excluded due to notable reliability and data normality concerns. Since their corresponding outcome

factors would not be retained, both AKCOT-*online security* and AKCOT-*cyber-therapy theory* are excluded from the next phase of the present work to maintain the structural integrity of the current research design. Descriptive statistics and Shapiro-Wilk tests of normality are reported in table 3.3 and Figures 3.3- 3.5.

Table 3.3: Descriptive statistics and Shapiro-Wilk test of normality for AKCOT-online ethics(2-item), AKCOT-online security(3-item) and AKCOT-cyber-therapy theory(3-item)

	N	Min.	Max.	Mean(SD)	Shapiro-Wilk		
					Stat.	df	Sig.
AKCOT-Online ethics(2-item)	19	1.00	5.00	3.026(1.19)	.853	19	.222 <sup>+</sup>
AKCOT-Online security(3-item)	19	2.33	4.67	3.87(.61)	.871	19	.015
AKCOT-Cyber-therapy theory(3- item)	19	2.00	4.67	3.92(.75)	.877	19	.019

<sup>+</sup>Indicates normally distributed data (Shapiro- Wilk >.05)

Figure 3.3

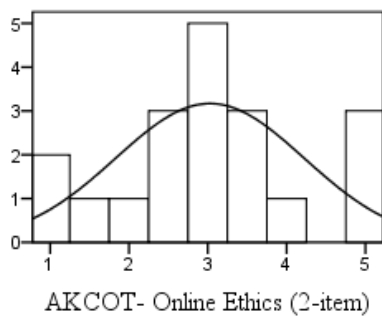


Figure 3.4

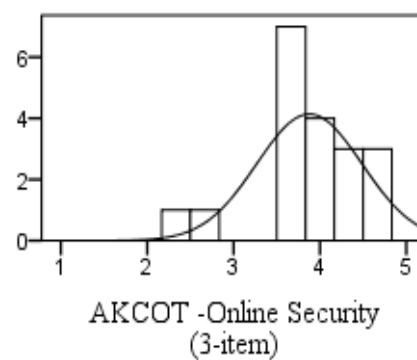
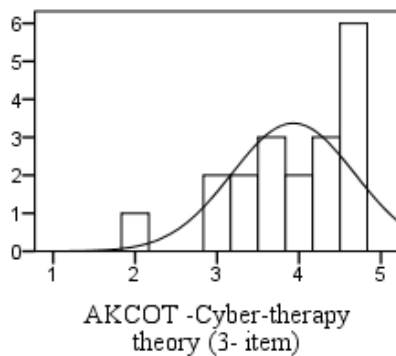


Figure 3.5



### 3.6.3.2. Motivation Scales

Descriptive statistics and Cronbach's alpha analysis for the motivation scales: perceived competence scale(PCS), intrinsic motivation inventory(IMI) and general causality orientation scales(GCOS) (with the subscales autonomy, impersonal and controlled orientation) are shown in table 3.4.

Table 3.4: Descriptive statistics for motivation scales.

	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean(SD)</i>	<i>Cronbach's alpha</i>
PCS	19	3.50	7.00	5.72(.90)	.767 *
IMI	19	2.44	5.67	3.83(.90)	.858 *
GCOS- Impersonal	19	2.00	4.83	3.42(.79)	.754 *
GCOS- Autonomy	19	5.08	7.00	6.16(.53)	.709 *
GCOS- Controlled	19	2.25	4.58	3.89(.58)	.532

\*Indicates sufficient reliability (Cronbach's alpha  $\geq$  .70)

Cronbach's alpha analysis for the *GCOS controlled orientation* subscale was repeated, removing items 4,5,6 and 10, which showed low internal consistency in relation to the rest of the scale items ( $<$  .20). The retained 8-item *GCOS-controlled orientation* scale had a Cronbach's alpha=.69, which is comparable to the originally published GCOS (Cronbach's alpha=.69) (Deci & Ryan, 1985). Table 3.5 shows the corrected item-total scale correlation for all the items of *GCOS-controlled orientation*, highlighting the four removed items and Cronbach's alpha value of the 8-item retained version.

Table 3.5: Cronbach's alpha corrected item-total scale correlation for GCOS controlled orientation scale excluded items and 8-item retained scale

GCOS-controlled orientation items	Corrected item-total scale correlation	Corrected item-total scale correlation for the retained items
Item 1b	.301	.396
Item 2c	.472	.467
Item 3a	.495	.557
<b>Item 4b</b>	<b>.015</b>	-
<b>Item 5c</b>	<b>-.041</b>	-
<b>Item 6c</b>	<b>-.003</b>	-
Item 7a	.299	.233
Item 8a	.271	.325
Item 9b	.309	.366
<b>Item 10c</b>	<b>-.164</b>	-
Item 11a	.487	.501
Item 12b	.192	.248
Total Internal Consistency	.532	.688

Highlighted **bold** items were removed to poor internal consistency

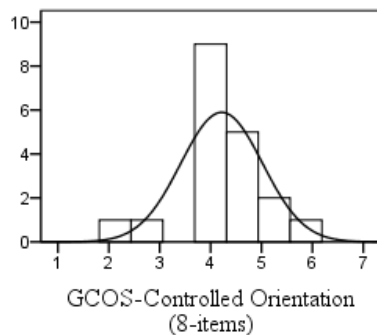
Descriptive statistics of the 8-item GCOS-controlled orientation retained subscale and Shapiro-Wilk test of normality are reported in table 3.6 and figure 3.6. Data yielded for the hereby 8-item *GCOS-controlled orientation* are normally distributed and are deemed suitable to be used in the subsequent regression analysis.

Table 3.6: Descriptive statistics and Shapiro-Wilk test of normality for 8-item GCOS controlled orientation scale

	N	Min.	Max.	Mean(SD)	Shapiro-Wilk		
					Statistic	df	Sig.
GCOS-Controlled orientation(8-items)	19	2.13	5.75	4.21(.803)	.930	19	.176 <sup>+</sup>

<sup>+</sup>Indicates normally distributed data (Shapiro- Wilk >.05)

Figure 3.6





### 3.6.3.3. Attributional style questionnaire and vignettes

Descriptive statistics and Cronbach's alpha analysis for the attributional style(AS) subscales are presented in table 3.7. The initial reliability analysis showed a Cronbach's alpha  $>.70$  for all the scales apart from *feelings of pity*. It is also observed that most of the scales showed moderate to low variance ( $SD < 1.65$ ) apart from *feelings of anger*, which was slightly higher ( $SD=1.89$ ). *Feelings of anger* ( $M=2.75$ ) and *segregating behaviours* ( $M=1.90$ ) are also unexpectedly low compared to previous findings by Corrigan et al. (2003).

Table 3.7: Descriptive statistics and Cronbach's alpha for attributional style scales relating to un-controllability of mental illness and controllability of mental illness vignettes

	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean(SD)</i>	<i>Cronbach's alpha</i>
<b>Vignette A</b>					
Personal responsibility beliefs(3-item)	19	1.00	5.00	2.47(1.21)	.867*
Feelings of pity(3-item)	19	4.00	9.00	6.33(1.58)	.601
Helping behaviours(4-item)	19	3.00	8.00	6.02(1.46)	.790*
<b>Vignette B</b>					
Personal responsibility beliefs(3-item)	19	1.33	7.00	3.75(1.63)	.790*
Feelings of anger(3-item)	19	1.00	8.67	2.75(1.89)	.956*
Coercion/ segregation behaviours(4-item)	19	1.00	5.25	1.90(1.17)	.876*

\*Indicates sufficient reliability (Cronbach's alpha  $\geq .70$ )

In their original studies, Corrigan et al. (2003) tested the AS scales using a general public sample and detected that high levels of feelings of anger predicted high levels of segregating behaviours. It might be that the current study sample of mental health clinicians might have played a confounding role leading to the lower than expected observation as the current AS scales. Corrigan et al.'s (2003) findings and their resulted predictive model, however, cannot hold against low levels of anger and low levels of segregating behaviours. As such, the low AS scores in this study raise validity issues and cannot be supported by the theoretical and research premises of its original authors (Corrigan et al. 2003). Consequently,

it is suggested that the present scales did not perform as expected and that their usefulness in the current project would be questionable. These scales will, therefore, not be considered in the next phase of this study along with the two categorical factors measuring participants' familiarity with mental illness, which are deemed redundant.

### 3.6.3.4. Computer-related knowledge (continuous control item)

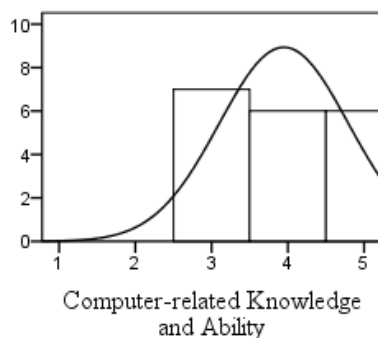
A Shapiro-Wilk test of normality indicated a negatively skewed distribution of data for the Computer-related knowledge item (see Table 3.8 and Figure 3.7), indicating that online practicing clinicians tend to score high on this item. This item is also excluded from the next phase of this study.

Table 3.8: Descriptive statistics and Shapiro-Wilk for computer-related knowledge. Likert scale: 1 (Little to No computer-related knowledge and ability)– 5 (I have more computer-related knowledge and ability than a majority of others I know)

	N	Min.	Max.	Mean(SD)	Shapiro-Wilk		
					Statistic	df	Sig.
How would you rate your overall computer-related knowledge and abilities?	19	3	5	3.95(.848)	.795	19	.001

Shapiro-Wilk >.05 indicates normally distributed data

Figure 3.7



### 3.6.4. Outcome Factors

#### 3.6.4.1. Outcome online therapy usage and applications(OOTUA)

Descriptive statistics and Cronbach's alpha analysis for the *outcome online therapy usage and applications(OOTUA)* scales *disinhibition applications* (3-item); *ethical applications* (3-item); *training engagement* (2- item); *online security applications* (2-item) and *cyber-therapy theory applications* (2-item) are presented in table 3.9.

Table 3.9: Descriptive statistics for OOTUA scales.

	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean(SD)</i>	<i>Cronbach's alpha</i>
OOTUA-Disinhibition applications(3-item)	19	1.33	5.00	3.29(1.07)	.758*
OOTUA-Training engagement(2-item)	19	1.50	5.00	3.76(1.28)	.640
OOTUA-Ethical applications(3-item)	19	2.00	5.00	4.14(.811)	.429
OOTUA-Cyber-therapy theory applications(2-item)	19	1.00	3.50	2.45(.832)	.338
OOTUA-Online security applications(2-item)	19	1.50	4.50	2.97(.772)	.186

\*Indicates sufficient reliability (Cronbach's alpha  $\geq$  .70)

The low internal consistency for the subscales OOTUA-*cyber-therapy theory applications* and OOTUA-*online security applications* (Table 3.9) is also reflected in the relatively low item-total correlation across their individual items, which is .103 and .250 respectively (Table 3.10). Literature indicates that the item-total correlation within a good enough scale would normally range between .20 and .70 (e.g. Ferketich, 1991; Varma, 2006). Further investigation through Shapiro-Wilk tests and normal distribution histograms (Figures 3.8 and 3.9) indicated non-normal distributions for these individual items, which renders them unsuitable to be tested in regression analysis. As such, both OOTUA-*online security* and OOTUA-*cyber-therapy applications* are excluded from the subsequent regression analysis.

Table 3.10: Cronbach's alpha corrected item-total correlations and Shapiro-Wilk for OOTUA-online security applications and cyber-therapy theory applications

Scale	Corrected item-total scale correlation	Shapiro-Wilk		
		Statistic	df	Sig.
OOTUA-Online security applications(2-item)				
Item 1	.103	.752	19	.000
Item 2	.103	.790	19	.001
Total internal consistency	.186			
OOTUA-Cyber-therapy theory applications (2-item)				
Item 1	.250	.646	19	.000
Item 2	.250	.883	19	.024
Total internal consistency	.338			

Shapiro-Wilk  $>.05$  indicates normally distributed data

Figure 3.8

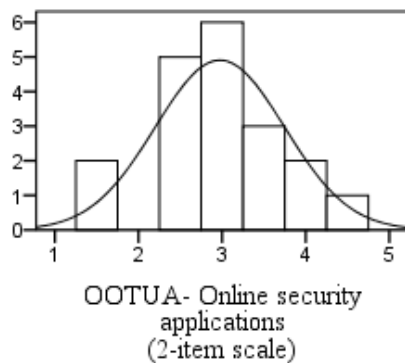
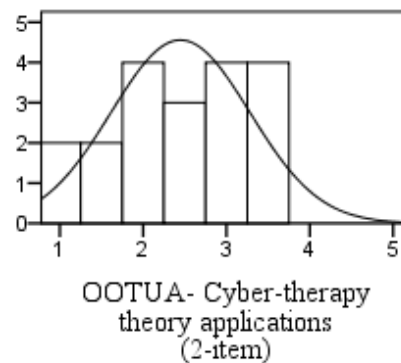


Figure 3.9



As shown in table 3.9, there are two remaining scales that showed insufficient reliability, OOTUA-ethical applications (3-item) (Cronbach's alpha=.429) and OOTUA-training engagement (2-item) (Cronbach's alpha=.640). Cronbach's alpha for OOTUA-ethical applications was improved to .563 after excluding 'item 3'. OOTUA-ethical applications is retained on the grounds of Dekovic et al. (1991), as its improved reliability comes close to .60 with satisfactory item-total correlations  $>.20$  (Ferketich, 1991). OOTUA-training engagement scale is also retained on the same grounds. Table 3.11 shows the corrected item-total scale correlation for the OOTUA-ethical applications and training engagement retained scales.

Table 3.11: Cronbach's alpha and corrected item-total scale correlation for OOTUA-ethical applications and training engagement.

Scale	Corrected item-total scale correlation	Corrected item-total scale correlation after item removal
OOTUA-Ethical applications(3-item)		
Item 1	.328	<b>.433</b>
Item 2	.456	<b>.433</b>
<b>Item 3</b>	<b>.079</b>	-
Total internal consistency	.429	.563
OOTUA-Training engagement(2-items)		
Item 1	.580	-
Item 2	.580	-
Total internal consistency	.640	

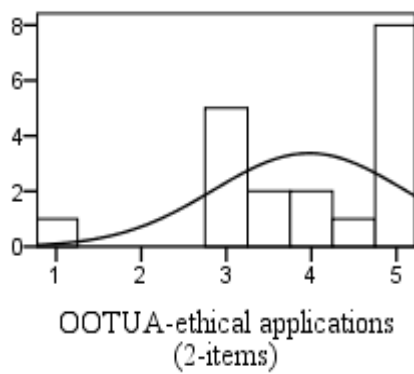
Shapiro-Wilk tests of normality and normality histograms for these two factors showed that their data were not normally distributed (Table 3.12 and Figures 3.10 and 3.11). Because their items showed good item-total correlation and given that these are outcome factor subscales, it was decided that a slightly increased variance than normal would be acceptable if the results are interpreted with caution. In addition, OOTUA-*training engagement* and *ethical considerations* are regarded as key aspects of online therapy practice (Weitz, 2018); thus, their retention contributes to the content validity of the OOTUA cluster of outcome factors. OOTUA-*ethical applications* and *training engagement* will be used in the subsequent regression analysis with the absence of normality in their data being monitored as to the potential violation of relevant regression assumptions (Best & Wolf, 2014).

Table 3.12: Descriptive statistics and Shapiro-Wilk for OOTUA-ethical applications(2- item) and training engagement(2-item)

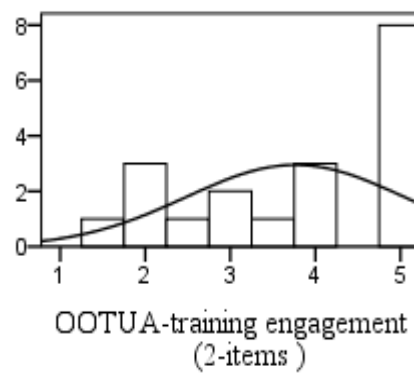
	N	Min.	Max.	Mean(SD)	Shapiro-Wilk		
					Statistic	df	Sig.
OOTUA-Ethical applications(2- item)	19	1	5	3.97(1.12)	.822	19	.002
OOTUA-Training engagement(2-item)	19	1.5	15	3.76(1.8)	.836	19	.004

Shapiro- Wilk >.05 indicates normally distributed data

Figures 3.10



Figures 3.11



### 3.6.4.2. OOTUA- Frequency factors: Diversity of modes of online intervention and Diversity of online security methods

Descriptive statistics, Shapiro-Wilk test of normality and normality histograms for the OOTUA *diversity of modes of online intervention* and *diversity of online security methods* are reported in table 3.13 below and figures 3.12 and 3.13. Both Shapiro-Wilk tests and normality histograms indicate that data of these factors were normally distributed and can be used in the subsequent regression analysis.

Table 3.13: Descriptive statistics and Shapiro-Wilk test of normality for OOTUA-Diversity of online therapy practices and diversity of online security methods'

	N	Min.	Max.	Mean(SD)	Shapiro-Wilk		
					Statistic	df	Sig.
Diversity of modes online therapy intervention	19	1	12	5.32(3.30)	.930	19	.171 <sup>+</sup>
Diversity of online security method	19	1	10	5.79(3.02)	.933	19	.199 <sup>+</sup>

<sup>+</sup>Indicates normally distributed data (Shapiro- Wilk >.05)

Figure 3.12

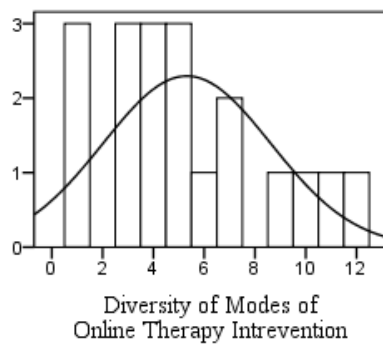
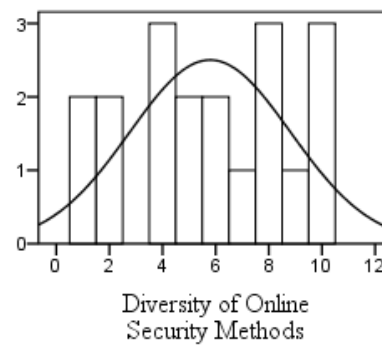


Figure 3.13



### 3.6.5. Simple linear regression analysis and power calculations

A series of linear regression analysis tested the predictive ability of the predictor scales on the outcome scales. This analysis was conducted to gauge which of the retained scales tend to show no statistical likelihood of contributing significantly to a final model of predictors. Through the subsequent power calculations, the expected effectiveness of the overall questionnaire could be assessed tentatively, so that its item content could be reduced to promote a better participant uptake ahead of study two. The results of the regression analysis and power calculations are presented according to their corresponding research questions. The individual regression results are presented according to each individual outcome scale.

### 3.6.5.1. *Regression assumptions*

The data included in these regressions were all continuous and collected through Likert-type scales. The assumption of heteroscedasticity was regularly monitored through the mean values of the residuals in each regression, which were found to be consistently equal to zero. In addition, none of the correlations indicated particularly strong correlations  $>.70$  (Best & Wolf, 2014). Most factors have consistently shown normally distributed histograms, and their data straddled the regression lines in a diagonal linear fashion. They also demonstrated consistent ‘birds-nest’ scatterplots when their residuals were regressed in the outcome factors (Best & Wolf, 2014).

OOTUA-*ethical applications* and *training engagement* (previously showed non-normal data) were also monitored. The distribution plots for these two outcome factors were normal ( $n=19$ ). P-Plots indicted some rough straddling over the regression lines, which is acceptable considering the small sample size of this study. Finally, the residual scatter plots show a random effect in a not perfect shape of a ‘birds-nest’. It is noted that residual scatter plots for OOTUA-*ethical applications* and *training engagement* showed faint patterns which are due to the levels of normality and the small sample size (Best & Wolf, 2014).

The main issue with the present linear regressions is their sample size (Green, 1991; Stevens, 2002). It is acknowledged that due to the limited sample size ( $n=19$ ), the internal and external validity of the regression analysis and consequent conclusions are limited (Green, 1991). To address this issue a series of power calculations (G\*Power 3.1.9.2) were performed on each regression result to determine their achieved power (given  $n=19$ ) and the projected sample size that would be required for each regression to be tested within a reliable margin of statistical significance ( $\alpha$  error prob.= .05,  $\beta$  error prob.= .20). The calculation method used was the “Linear bivariate regression: One group, size of slope” (Dupont &



Plummer, 1998). Following are reported the results of the simple linear regressions in relation to each of the main research questions of this study, with of all the individual predictor factors being regressed against each outcome factor.

**3.6.5.2. Research question one:** Which of the OOTUA factors will be significantly predicted by each of the individual AKCOT factors.

**3.6.5.2.1. OOUTA-Diversity of modes of online communication**

The regression analysis indicated that AKCOT- *Online Disinhibition* ( $R^2 = .091$ ,  $F(1,17) = 1.69$ ,  $p = .210$ ), AKCOT-*ethics literature* ( $R^2 = .058$ ,  $F(1,17) = 1.05$ ,  $p = .319$ ), and AKCOT-*training recommendations* ( $R^2 = .14$ ,  $F(1,17) = 2.86$ ,  $p = .109$ ) did not significantly predict diversity of online modes of communication.

**3.6.5.2.2. OOTUA-Diversity on online security methods**

It was indicated that AKCOT-*online disinhibition* significantly predicted the *diversity of online security methods* accounting for 21.3% of the variance ( $R^2 = .213$ ,  $F(1,17) = 4.60$ ,  $p < .05$ ). Also, AKCOT-*online therapy training requirements* ( $R^2 = .34$ ,  $F(1,17) = 8.85$ ,  $p < .008$ ) predicted significantly the *diversity of online security methods*, accounting for 34% of the variance. In contrast AKCOT-*online ethics* did not show significant predictive effect on this outcome factor ( $R^2 = .049$ ,  $F(1,17) = .871$ ,  $p = .364$ ).

**3.6.5.2.3. OOTUA-Disinhibition applications**

It was indicated that that AKCOT *online disinhibition* significantly predicted OOTUA-*disinhibition applications* accounting for 39,6% of the variance ( $R^2 = .396$ ,  $F(1,17) = 11.13$ ,  $p < .05$ ). In contrast, AKCOT-*online ethics* ( $R^2 = 0$ ,  $F(1,17) = .008$ ,  $p = .928$ ) and AKCOT-*online therapy training requirements* ( $R^2 = .054$ ,  $F(1,17) = .969$ ,  $p = .33$ ) did not predict *disinhibition applications*.

#### 3.6.5.2.4. OOTUA-Ethics applications

It was indicated that AKCOT-*online ethics* significantly predicted OOTUA-*ethics applications* accounting for 53.9% of the variance ( $R^2 = .539$ ,  $F(1,17) = 19.89$ ,  $p < .01$ ). In contrast, AKCOT-*online disinhibition* ( $R^2 = .0$ ,  $F(1,17) = .002$ ,  $p = .967$ ) and AKCOT-*online therapy training requirements* ( $R^2 = .003$ ,  $F(1,17) = .057$ ,  $p = .814$ ) did not show any predictive effect towards *ethics applications*.

#### 3.6.5.2.5. OOTUA-Training engagement

It was indicated that AKCOT-*online disinhibition* significantly predicted OOTUA-*training engagement* accounting for the 24.9% of the variance ( $R^2 = .249$ ,  $F(1,17) = 5.65$ ,  $p < .05$ ). Also, AKCOT-*online therapy training requirements* significantly predicted OOTUA-*training engagement* accounting for the 29.2% of the variance ( $R^2 = .292$ ,  $F(1,17) = 7.00$ ,  $p < .05$ ). In contrast AKCOT-*online ethics* did not show a significant predictive effect towards *training engagement* ( $R^2 = .013$ ,  $F(1,17) = .221$ ,  $p = .644$ ).

**3.6.5.2.6. Power calculations for research question one**

Table 3.14 shows a summary of the power calculations and samples size estimations for all of the regression analysis relevant to research question one.

*Table 3.14: Summarises the observed power for each regression result of OOTUA\*AKCOT based on n=19 and indicates the projected sample size needed to achieve power =.80.*

<b>Achieved power given n=19(projected minimum sample size to achieve power ≥ .80)</b>					
<b>Predictors</b>	<b>Outcome Factors</b>				
	OTTUA- Diversity of online practices	OOTUA- Diversity of online security methods	OOTUA- Disinhibition application	OOTUA- Ethics applications	OOTUA- Training engagement
AKCOT-online disinhibition	.25(n=81)	.57(n=31)**	.91**	.05(n>5000)	.65(n=26)**
AKCOT-online ethics	.17(n=129)	.15(n=156)	.05(n>7000)	.99**	.07(n=603)
AKCOT-online therapy training recommendations	.39(n=49)	.84**	.16 (n=140)	.05(n=2321)	.75(n=22)**

*\*\*Indicates significant linear regressions  $p < .05$ . as reported previously*

*Note: Regressions with observed power  $\geq .80$  were not subjected to sample size calculation as they showed adequate power given n=19*

As can be seen (Table 3.14), all three scales have shown some predictive effect on their corresponding OOTUA factors. It is noted that AKCOT-*online ethics* seems to be the least consistent out of the three predictors here. This might be due to the non-normality of its data identified earlier. AKCOT-*online ethics*, however, seems to hold a notable potential explaining the variance in its corresponding outcome factor OOUTA-*ethics applications*. Therefore, all three AKCOT subsections will be used to re-assess the main research questions as there could be more benefits in retaining than losing any of these factors.

**3.6.5.3. Research question two:** Which of the OOTUA factors will be significantly predicted by each of the individual motivation factors.

**3.6.5.3.1. OOUTA-Diversity of modes of online communication**

It was indicated that *intrinsic motivation* significantly predicted the *diversity of modes of online communication*, accounting for 21.4% of the variance ( $R^2 = .241$ ,  $F(1,17) = 4.62$ ,  $p < .05$ ). In contrast, the following factors did not show a statistically significant predictive effect towards OOUTA-*diversity of modes of online communication*: *perceived competence in online therapeutic alliance(PCS)* ( $R^2 = .060$ ,  $F(1,17) = 1.093$ ,  $p = .31$ ), *GCOS-autonomy* ( $R^2 = .108$ ,  $F(1,17) = 2.051$ ,  $p = .170$ ); *GCOS-impersonal* ( $R^2 = .011$ ,  $F(1,17) = .192$ ,  $p = .667$ ); and *GCOS-controlled* ( $R^2 = .061$ ,  $F(1,17) = 1.11$ ,  $p = .307$ ).

**3.6.5.3.2. OOTUA- Diversity of online security methods**

It was indicated that *perceived competence(PCS)* significantly predicted OOTUA-*diversity of online security methods*, accounting for 23.7% of the variance ( $R^2 = .237$ ,  $F(1,17) = 5.26$ ,  $p = .035$ ). The following factors did not show a statistically significant predictive effect towards OOTUA-*diversity of online security methods*: *intrinsic motivation* ( $R^2 = .167$ ,  $F(1,17) = 3.411$ ,  $p = .082$ ); *GCOS-autonomy* ( $R^2 = .142$ ,  $F(1,17) = 2.82$ ,  $p = .111$ ); *GCOS-impersonal* ( $R^2 = .002$ ,  $F(1,17) = .027$ ,  $p = .871$ ); and *GCOS-controlled* ( $R^2 = .108$ ,  $F(1,17) = 2.04$ ,  $p = .170$ ).

**3.6.5.3.3. OOTUA-Disinhibition applications**

It was indicated that *PCS* significantly predicted OOTUA-*disinhibition applications* accounting for 27.5% of the variance ( $R^2 = .275$ ,  $F(1,17) = 6.43$ ,  $p < .05$ ). It was also found that *GCOS-controlled orientation* significantly predicted OOTUA-*disinhibition applications* accounting for 35.4% of the variance ( $R^2 = .354$ ,  $F(1,17) = 9.33$ ,  $p < .05$ ). The following factors did not show a statistically significant predictive effect: *intrinsic motivation* ( $R^2 = .012$ ,

$F(1,17)= .198, p= .662)$  *GCOS-autonomy* ( $R^2= .002, F(1,17)= .032, p= .860$ ) and *GCOS-impersonal* ( $R^2= .113, F(1,17)= 2.171, p= .159$ ).

#### 3.6.5.3.4. *OOTUA-Ethics applications*

Regression analysis indicated that *GCOS-controlled orientation* significantly predicted *OOTUA-ethics applications* accounting for the 23.2% of the variance ( $R^2= .232, F(1,17)= 5.13, p< .05$ ). Also, *PCS* was marginally significant in predicting *OOTUA-ethics applications* accounting for 19.9% of the variance ( $R^2= .199, F(1,17)= 4.23, p= .055$ ). The following factors did not show a statistically significant predictive effect: *GCOS-autonomy* ( $R^2= .088, F(1,17)= 1.65, p= .216$ ), *GCOS-impersonal* ( $R^2= .158, F(1,17)= 3.19, p= .092$ ), *PCS* ( $R^2= .115, F(1,17)= 3.11, p= .095$ ), and *intrinsic motivation* ( $R^2= .028, F(1,17)= .495, p= .491$ ).

#### 3.6.5.3.5. *OOTUA-Training engagement*

Regression analysis indicated that none of the motivation predictors showed any significant predictive effect towards *OOTUA-training engagement*. The regression results associated with each motivation predictors are: *PCS* ( $R^2= .026, F(1,17)= .460, p= .507$ ), and *intrinsic motivation* ( $R^2= .034, F(1,17)= .593, p= .452$ ), *GCOS-autonomy* ( $R^2= .004, F(1,17)= .064, p= .803$ ), *GCOS-impersonal* ( $R^2= .0, F(1,17)= .0, p= .996$ ), *GCOS-controlled orientation* ( $R^2= .72, F(1,17)= 1.31, p< .267$ ).

### 3.6.5.3.6. Power calculations regarding research question two

Table 3.15 summarises the power calculation results and samples size estimations for all the regressions relevant to research question two.

Table 3.15: Summarises the observed power for each regression result of OOTUA\*Motivation based on  $n=19$  and indicates the projected sample size needed to achieve power  $=.80$ .

Achieved power given $n=19$ (projected minimum sample size to achieve power $\geq .80$ )					
Predictors	OOTUA-Outcome Factors				
	OOTUA-Diversity of online practices	OOTUA-Diversity of online security methods	OOTUA-Disinhibition application	OOTUA-Ethics applications	OOTUA-Training engagement
PCS	.13( $n=185$ )	.62( $n=28$ )**	.71( $n=23$ )**	.53( $n=34$ )**	.10( $n=293$ )
IMI	.14( $n=164$ )**	.45( $n=42$ )	.07( $n=670$ )	.10( $n=273$ )	.11( $n=227$ )
<b>GCOS-Autonomy<sup>++</sup></b>	.29( $n=68$ )	.38( $n=50$ )	.05( $n=4128$ )	.24( $n=83$ )	.05( $n=2074$ )
<b>GCOS-Impersonal<sup>++</sup></b>	.91(-)	.05( $n=4900$ )	.05( $n=6925$ )	.42( $n=44$ )	.05( $n>7000$ )
GCOS-Controlled	.18( $n=123$ )	.29( $n=68$ )	.86(-)**	.61( $n=29$ )**	.20( $n=104$ )

\*\*Indicates significant linear regressions  $p < .05$ . as reported previously

Note: Regression with observed power  $\geq .80$  were not subjected to sample size calculation as they showed adequate power given  $n=19$

<sup>++</sup> Factor will be excluded from the next phase of this study

As can be seen (Table 3.15 bold), the scales GCOS-*autonomy* and GCOS-*impersonal* showed no significant predictive effect towards any of the outcome scales. Power analysis indicates that substantially large sample size will be needed for GCOS- *autonomy* and GCOS-*impersonal* factors' predictive ability to be assessed meaningfully. The projected sample sizes vary considerably for each corresponding regression (to these scales) indicating

that they can be inconsistent. Also, their projected sample size estimations exceed the scope and time limitations of the present project. Exclusion of these factors could contribute to further reducing the quite lengthy original questionnaire of this study, which is regarded as a key modification in the pursuit of better participation rates ahead of study two. It is also noted that both *GCOS-autonomy* and *impersonal* are theoretically associated with the retained measures of *intrinsic motivation* and *PCS*; so the structural integrity of the motivation factors is affected to the minimum degree possible. Based on these considerations, it is suggested that the risks of maintaining *GCOS-autonomy* and *impersonal* outweigh the merits, and therefore, they are excluded from the next phase of the present study.

### **3.7. Discussion**

The initial overly long questionnaire was, according to participants' feedback, deemed responsible for the increasing drop-out rate and the limited sample size achieved in this study. As such, the process of reduction analysis conducted, in study one, was intended to reduce the initial questionnaire while finalising and assessing the psychometric properties of the retained questionnaire items that would be included in the next phase of data collection. The questionnaire was condensed, in a statistically and theoretically coherent way, to increase the likelihood that the following round of data collection will be successful. The condensed questionnaire translates to a reduction of the 98 initial question items to 42 remaining items, which is expected to contribute to a better completion rate of the questionnaire going into the main study of this thesis project. Based on the Cronbach's alpha approach, question items were removed due to their limited reliability and validity properties and based on their theoretical contribution to the overall factors structure. Thus, it was ensured that the retained items will still be able to support the initial aims, and intended exploration of the current thesis, as to the role of AKCOT and key motivational factors against the OOTUA practical applications of online therapy.

The excluded items are: AKCOT-*online security* and AKCOT-*cyber-therapy theory* (Table 3.2) and their corresponding OOTUA-*cyber-therapy theory applications* and OOTUA-*online security applications* (Table 3.9); the GCOS-*autonomy* and *impersonal scales* and the *attributional style* questionnaires (Tables 3.5 and 3.7). As the population of active online practicing clinicians remains largely unexplored, it was deemed essential that the current project focused on reducing the initial questionnaire so that better access to the intended population, through a sufficiently large sample, could be achieved. This constitutes a notable gap in the literature and a critical area of priority in the field of online therapy (e.g. Richards et al., 2018; Vis et al., 2017). As such, the exclusion of the current scales is part of a process of trading theoretical depth, in order to overcome unforeseen obstacles which threatened the feasibility of the current project. These exclusions are seen, therefore, as not detrimental to the current project but essential to achieving the primary objectives of this body of work, which were associated with the contribution of empirical data in the area of applied online therapy. It is acknowledged, however, that the exclusion of these scales constrains the theoretical scope of the current thesis as associated constructs will not be explored in the next phase of the current work. The next paragraphs discuss the theoretical implications of these exclusions.

### **3.7.1. Theoretical implications of the excluded items**

The exclusion of *cyber-therapy theory* (both OOTUA and AKCOT) means that the current body of work will no longer be able to assess whether participants' awareness of key cyber-theory theoretical premises, of online communication, would associate significantly with the practical applications thereof (see Suler, 2016). According to Suler (2004; 2016) and Anthony (2015), the online therapist's role lies in their ability to combine various modes of online communication, and pathways, in a theoretically informed way facilitating increased online self-expression. While the current work will still examine the degree to which online



clinicians endorse diverse modes of communication through the remaining factor of OOTUA-*diversity of online modes of communication*, the exclusion of the hereby factors limits the current thesis' ability discerning whether the observed use of diverse modes of communication would be underpinned by a level of awareness as to specific cyber-therapeutic theoretical considerations of online communication.

Similarly, the exclusion of *online security* (both OOTUA and AKCOT) means that the next phase of this body of work will be limited in assessing whether online clinicians' awareness of key online security recommendations would map onto the practical application thereof. Online therapy writers (e.g. Waugh, 2017; Weitz, 2014 ) have highlighted the key practical aspects associated with online therapy security and indicated that clinicians who are not fully aware of these considerations would be unlikely to know how to anticipate and address online security concerns should they arise in therapy. The current body of work will still be able to make assertions as to the adoption of various security measures through the remaining factor of OOTUA-*diversity of security methods*. It will be limited, however, in its ability to discern whether this is associated with levels of awareness of key security recommendations as those are presented within the existing literature.

The exclusion of the motivational scales GCOS-*autonomy* and *impersonal scales* is expected to limit the current work's theoretical framework in relation to the associated motivational constructs. According to Deci and Ryan (2002), motivational behaviour is governed by the three psychological needs of *autonomy*, *perceived competence* and *relatedness*. Among the research aims of the current thesis is to assess whether these aspects of motivational behaviour would be associated with the adoption of key online therapy practices. Despite the exclusion of the two above motivational scales, the current thesis will still be able to work towards this aim based on its remaining scales of *intrinsic motivation inventory* (IMI), *perceived competence scale* (PCS) and GCOS-*Controlled orientation*, which

capture all of the basic tenets of Deci and Ryan's self-determination theory. Due to the hereby exclusions, however, the current thesis will be limited in its inferences as to the inter-relatedness and interaction of the retained theoretical contacts in relation to self-determination theory.

Finally, the exclusion of the *attributional style* scales will have a similar impact on the current exploration. It has been indicated earlier, in the literature review chapter, that clinicians' potential stigma attributions (as to mental illness) might influence the relationship between extrinsic motivation and practical applications online therapy key considerations. As such, the intention to assess clinicians' attributional style was aimed to provide a secondary layer of interpretation, accounting for theoretical indications, as to the potential overlap between stigma attributions and extrinsically motivated behaviours (in relation to the application of key considerations in online therapy). While the current thesis will still be able to assess whether extrinsic motivation is associated with the retained outcome factors, it will be unable to investigate any partial effects that might be in effect due to potential stigma attributions in the sample.

### **3.7.2. Limitations of the current research design**

The reduction of the overall questionnaire and exclusion of the above scales was based on several pillars of decision-making, which considered both statistical and theoretical factors as well as the sampling limitations faced in this study. While the Cronbach's alpha reduction analysis approach, was suitable considering the limited sample of study one, it has a key limitation. It relies on the removal of problematic items, at the post-data collection stage, and does not offer the possibility for the unreliable scales to be redeveloped so that they could be retained. On this basis, future work could consider redeveloping and testing the

excluded scales as their contribution would be valuable in enhancing the expected outcomes and theoretical framework of the current project.

Considering the limited sample size, it is important to note that the evaluation of the validity properties of the current scales was not possible at this stage (e.g. Field, 2009). It is also noted that a potential factor analysis (which is usually the preferred method used for the statistical validation of a set of factors) was deemed unsuitable in study one due to the very limited sample size (e.g. Stevens, 2002). As such, the issue of scale validation (regarding the purpose-built scales AKCOT and OOTUA) remains an ongoing issue, This will be addressed in study two using the correlational matrix approach (Bhattacharjee, 2012), or an appropriate factor analysis procedure, given that the necessary sampling requirements are met. As indicated by the power analysis, study two will need an approximate sample size of 130 participants to ensure that its results achieve sufficient statistical power. This indication is important as there is no agreement in the literature as to the exact sample that would suffice in a regression analysis design (e.g. Green, 1991; Stevens, 2002).

In addition, it is recognised that the increase in the study-wise error rate per analysis alpha, which is associated with the current multiple analysis design was not controlled for in this study. Study one findings are regarded as preliminary and aimed at guiding the reduction of the main study questionnaire. On this basis and considering that study one is already limited in its statistical power (due to its small sample size), the usefulness of a multiple comparison correction procedure, such as the Bonferroni correction, would be questionable and potentially counterproductive (e.g. Cabin & Mitchell, 2000; Nakagawa, 2004). Bonferroni corrections, however, will be applied in study two which is aimed at capturing the main results of this thesis project achieving sufficient statistical power, therefore providing better grounds to support the meaningful application of the correction.

To ensure better efficacy of the next phase of data collection and to take on board the verbal feedback provided by participants, two additional modifications will be implemented in study two. Firstly, the questionnaire will undergo a minor content refinement to become as jargon-free as possible. Secondly, clinicians with diverse online therapy experience will be invited to take part, thus removing the threshold of at least one year's online therapy experience. This will hopefully facilitate better access and representation of those clinicians who engage with diverse forms of online therapy across different settings. The chair of the University of Wolverhampton's ethics committee reviewed and approved the hereby modifications before the next study could commence. Please, see Appendix E for the chair's action application, and Appendix F for chair's approval of the proposed modifications.

## 4. Chapter four. Study two: Main empirical study

### 4.1. Introduction

Clinician-related considerations regarding the formation of an online therapeutic alliance and a series of practical considerations around online security and ethical practice measures have been highlighted, in the current thesis, as key factors in establishing a safe and contained therapeutic space online. According to Suler (2016) and Anthony and Nagel (2010), this endeavour is underpinned by the diverse nature of online communication and a series of key online disinhibition theoretical premises including text-based communication. Having highlighted these areas in existing literature, study one was conducted aiming at developing a questionnaire that could assess the associated constructs and test the original hypotheses of this thesis project, as those have been formulated at the end of chapter two.

Based on study one's reliability analysis and a tentative design of simple linear regressions, it was identified that the current study will assess the motivational constructs of GCOS -*controlled orientation, intrinsic motivation and perceived competence in forming an online therapeutic alliance*; and the three retained AKCOT factors of *online disinhibition, online ethics, and online therapy training requirements* as to their predictive ability towards the retained OOTUA factors: *diversity of modes of communication, diversity of online security methods, disinhibition applications, ethical applications and training engagement*. Thus, it is important to fully establish the impact of the retained scales and design on the thesis as a whole.

To this effect, it is indicated that the retained *online disinhibition* factors (both AKCOT and OOTUA) represent one of the key theoretical considerations assessed in the current work. As proposed by Dunn (2014) and Suler (2004; 2016) the theory of online disinhibition, and the process of disinhibition, are critical elements underpinning the

development of an online therapeutic alliance. On the same basis, Alfonsson et al. (2016) argue that online disinhibition is, a central premise to online client engagement. Although the associated factors of *cyber-therapeutic theory* have been excluded from the current study, the remaining factors of *online disinhibition* are expected to provide sufficient theoretical basis for the exploration of disinhibition. That is because online disinhibition is central to prominent cyber-therapeutic theories, such as those put forward by Suler (2016) and Anthony and Nagel (2010). Additionally, these writers have stressed that the use of diverse modes of communication is key in the applications of online disinhibition theory. As such, they recommend that the integration of the diverse modes of communication is underpinned by key theoretical concepts such as disinhibition theory and reduced cues theory (see Anthony and Nagel, 2010). Given the sampling limitations of the current thesis as outlined in section 3.7, it is accepted that the retained factors of AKCOT-*online disinhibition* will be in a position to represent the main theoretical factors associated with the therapeutic alliance online, and will be able to produce relevant results in relation to the retained outcome factors and OOTUA-*disinhibition applications* and OOTUA-*diversity of modes of communication*.

Concerning the practical considerations of online therapy, as outlined earlier in chapter two, *online security*, *ethical therapeutic practice* and *engagement with specialist training* are central elements for a sound online therapeutic practice. As proposed in the current thesis these considerations would also be critical in promoting client perceptions of credibility, which as indicated by Alfonsson et al. (2016) crucial in facilitating online client engagement. Although the factors of *online security* (both AKCOT and OOTUA) have been excluded from this study, the key aspects of practical considerations will still be able to be assessed through the retained factors of AKCOT *online ethics*, and *online therapy training requirements* which will be regressed on the retained OOTUA factors: *ethical applications* and *training engagement* and OOTUA- *diversity of online security methods*.

Finally, based self-determination theory (Deci and Ryan, 2002; 2011) the current thesis sought to assess the potential predictive effect of intrinsic and extrinsic motivation against clinicians' uses and applications of online therapy. According to Deci and Ryan, intrinsic motivation is underpinned by the aspects of autonomy, perceived competence and perceived tension associated with a given behaviour. Although the scales of *GCOS-Autonomy* and *Impersonal orientation* have been excluded from the current study, the retained scales of *intrinsic motivation inventory* (IMI) and *perceived competence* (PCS) are able to capture the main theoretical constructs associated with the notion of intrinsic motivation. The extrinsic motivation construct is assessed based on the retained scale of *GCOS-controlled orientation*. While these scales provide sufficient grounds for the relevant hypothesis to be evaluated (see below for a reminder), it is recognised that the current study remains limited in testing the potential, secondary effect of attributional style against online therapy uses and applications. This is due to the exclusion of the initial attributional style questionnaire and the fact that at the time of writing a replacement scale, that could be suitably used in the current study, could not be sourced. This remains a limitation of the current work and needs to be kept in mind when interpreting the results associated with *GCOS-controlled orientation*.

Based on the current rationale, study two (main study) employs the reduced questionnaire and uses an online survey which was structured according to the results of study one. A series of preliminary reliability and validity analysis are conducted to evaluate the current scales and normality of the data collected. A series of multiple regression analysis was performed to test the current research questions meaningfully:

- 1) Which of the OOTUA factors will be significantly predicted by the cluster of *Awareness of Key Considerations in Online Therapy*(AKCOT) predictor factors.
- 2) Which of the OOTUA factors will be significantly predicted by the cluster of motivation factors.

## 4.2. Participants

In line with the snowball sampling method (Smith, 2012), research coordinators of professional registration bodies and psychology-related companies, as well as administrators of online social media were contacted via email or telephone to take part and facilitate dissemination of the online survey. In addition, generic social media public posts were distributed among online-based research and professional groups, calling for mental health clinicians to take part and facilitate dissemination of the survey. Participation in this study was anonymous and voluntary, and no reward for participation was offered.

A total of 252 participants completed the questionnaire providing data from the UK, America, Australian, European- registered and non-registered clinicians. Although the present study was advertised as being open only to UK-based clinicians, those from the above countries entered and completed the study in their own volition. Due to the scarcity of quantitative studies investigating online clinicians-related factors (e.g. Vis et al., 2018), and the difficulty in reaching this population (e.g. Hennemann et al., 2017; IJzerman, 2017), it was deemed valuable to consider the possibility of utilising the American sample along with the UK sample. Preliminary analysis was, therefore performed to determine the statistical viability of this consideration. To minimise the risk of possible cross-sample confounding effects impacting the preliminary analysis, data from the European, Australian and non-registered clinicians was automatically excluded from this study. Some data cases were found to have the same IP address as some cases in study one and therefore were also eliminated.

A series of Welch's t-tests analysis was carried out for all predictor and outcome factors between the American ( $n=36$ ) and UK sample ( $n=138$ ). Welch's t-test was preferred in this case due to the unequal sample sizes between the two samples (e.g. Gamage, & Weerahandi, 1998). The assumption of homogeneity of variance was tested and satisfied as the Levene's  $F$  tests that were performed on every factor showed no statistically significant



difference among the two samples ( $df=172$ ,  $p>.05$ ). The American sample and UK sample distributions were estimated by calculating the skewness and kurtosis for each factor and were found to be consistently normal according to Schmider et al. (2010) (skew  $< 2.0$  and kurtosis  $< 9.0$ ). The results of Welch's t-tests along with the American and UK samples mean scores and standard deviations are shown in tables 4.1 and 4.2.

Table 4.1: Descriptive statistics and t-test comparisons between American-based and UK- based clinicians for all predictor factors: 1) Awareness of Key Considerations in Online Therapy (AKCOT) subscales; 2) Motivation factors

	Group	N	Min.	Max.	Mean(SD)	Welch's t-test		
						t	df	Sig.
<b>AKCOT sub-scales</b>								
AKCOT-online disinhibition (3-item)	America	36	1	5	3.25(.757)	.841	50.79	.433
	UK	138	1	5	3.14(.682)			
	Total	174	1	5	3.16(.697)			
AKCOT-online therapy training requirements (3-items)	America	36	2	5	4.10(.831)	1.45	55.09	.150
	UK	138	1	5	3.87(.839)			
	Total	174	1	5	3.92(.840)			
AKCOT-online ethics(2-item)	America	36	1	5	2.47(1.28)	2.03	52.30	.055
	UK	138	1	5	2.93(1.21)			
	Total	174	1	5	2.84(1.23)			
<b>Motivation factors</b>								
General Causality-CO (8 items)	America	36	2.13	5.50	4.28(.86)	3.15	56.07	.002*
	UK	138	1.63	5.63	3.75(.89)			
	Total	174	1.63	5.63	3.86(.90)			
Intrinsic motivation (9-items)	America	36	2.33	5.89	4.10(.958)	2.84	55.22	.006**
	UK	138	1.67	5.67	3.58(.971)			
	Total	174	1.67	5.89	3.69(.988)			
Perceived competence (4 items)	America	36	1	7	5.13(1.69)	.68	51.78	.513
	UK	138	1	7	4.93(1.57)			
	Total	174	1	7	4.97(1.59)			

\*\* Significant t-test  $p > .05$

Table 4.2: Descriptive statistics and t-test comparisons between American-based and UK- based samples for OOTUA

	Group	N	Min.	Max.	Mean(SD)	Welch's t-test		
						T	df	p
<b>OOTUA sub-scales</b>								
OOTUA-online disinhibition (3-item)	America	36	1	5	2.84(1.01)	.747	48.78	.502
	UK	138	1	5	2.71(.859)			
	Total	174	1	5	2.74(.893)			
OOTUA-online therapy training engagement (2-items)	America	36	2	5	2.66(.792)	.784	57.79	.417
	UK	138	1	5	2.78(.849)			
	Total	174	1	5	2.76(.837)			
OOTUA-online ethics (2-item)	America	36	1	5	3.26(1.42)	1.73	49.56	.118
	UK	138	1	5	3.67(1.23)			
	Total	174	1	5	3.59(1.28)			
OOTUA-Diversity of modes of online communication	America	36	1	16	6.64(3.28)	1.73	56.32	.224
	UK	138	0	18	5.88(3.41)			
	Total	174	0	18	6.03(3.39)			
OOTUA-Diversity of online security methods	America	36	0	9	3.83(2.97)	1.73	54.56	.278
	UK	138	0	10	3.22(2.96)			
	Total	174	0	10	3.35(2.96)			

\*\*Significant t-test  $p > .05$

The histograms of normality associated with each factor ( $n=174$ ) are presented in figures 4.1 to 4.11, illustrating mostly normally distributed data.

### Predictor factors histograms

Figure 4.1

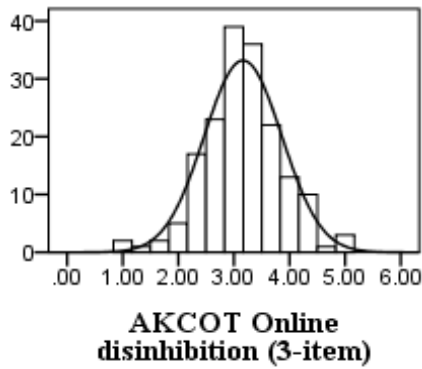


Figure 4.2

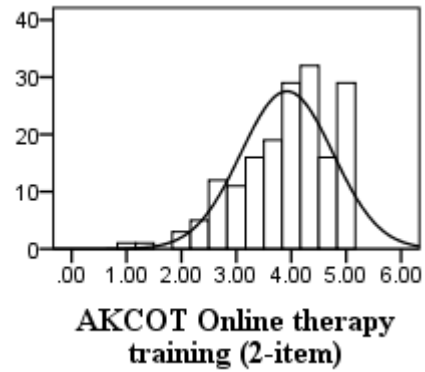


Figure 4.3

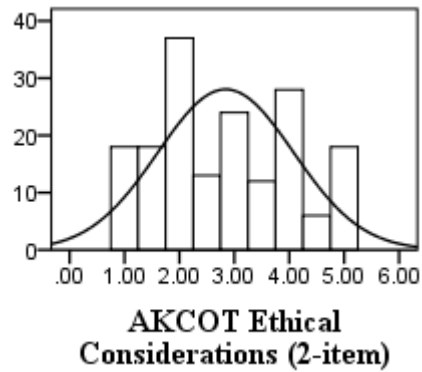


Figure 4.4

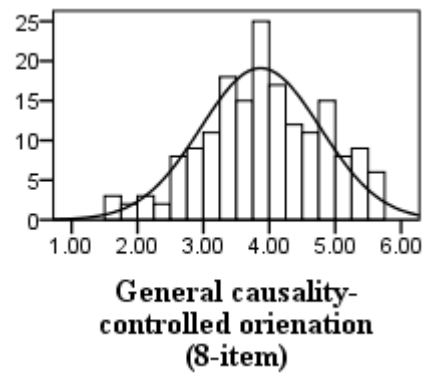


Figure 4.5

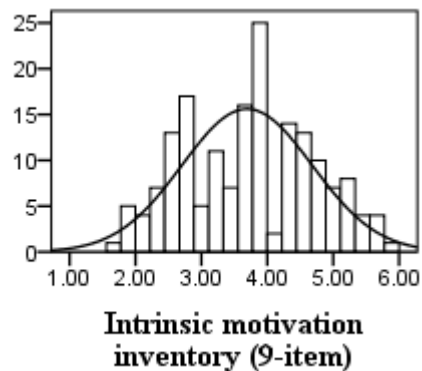
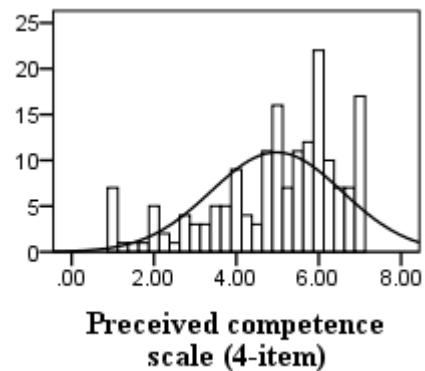
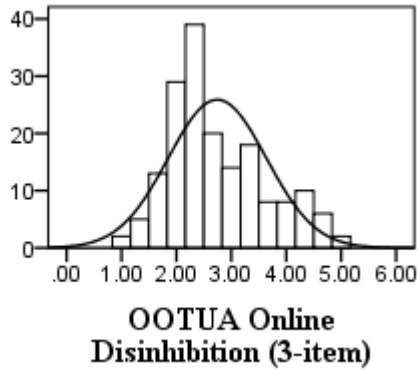


Figure 4.6

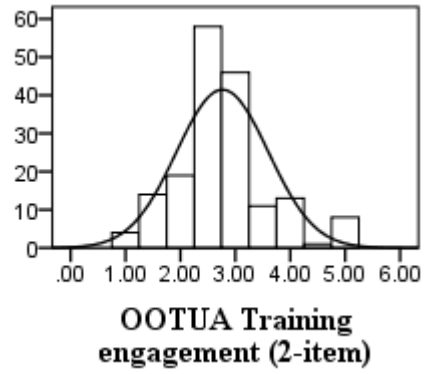


**Outcome factors histograms**

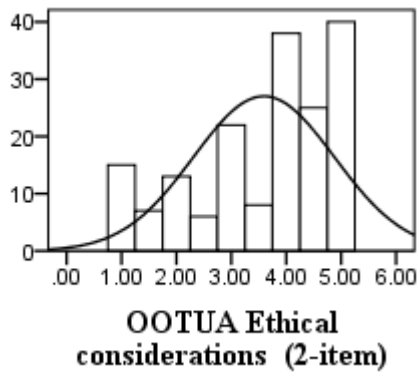
*Figure 4.7*



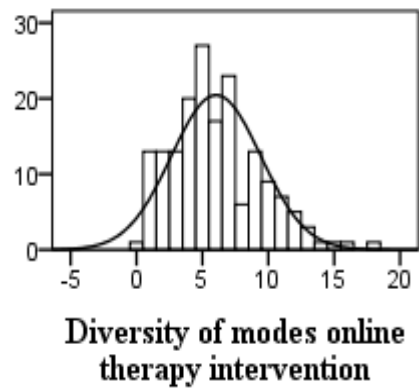
*Figure 4.8*



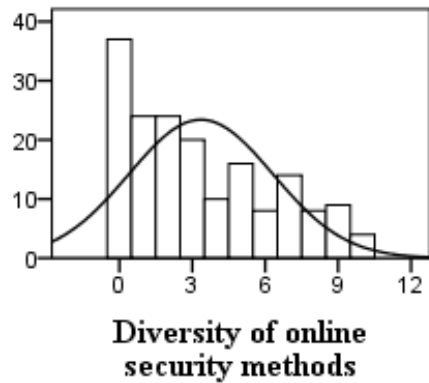
*Figure 4.9*



*Figure 4.10*



*Figure 4.11*



As can be seen in tables 4.1 and 4.2, the majority of t-tests showed no significant differences between American and UK mean scores. Significant differences were, however, identified for the two predictor factors of GCOS-CO and *intrinsic motivation* (IMI). When these differences are considered in the context of the combined sample, they might simply represent part of the overall distribution of the scores, which as seen from the normality histograms 4.4 and 4.5 are depicted to be normal. Given that significant differences were associated with only two factors, and given that neither the IMI nor the GCOS-CO is directly referred to applications of online therapy, it has been decided to combine the American and UK samples in the subsequent analysis of this study. Caution will be required when analysing and interpreting the results associated with the GCOS-CO and IMI predictors.

As follows, data from 174 participants (146 Females, 26 Male, 2 identifying as Transgender or other) aged 25-74 years ( $M= 47.44$ ,  $SD= 10.77$ ) was included in study two. A total of 34 participants were psychologists, 116 therapists or counsellors, 5 social workers, 7 mental health nurses and 12 trainee counsellors or psychologists. In terms of the highest level of academic qualifications, there were 30 participants with doctorates, 85 with master's degrees, 36 diplomas, 6 certificates and 17 bachelor's degrees. A total of 138 participants were registered with a UK-based professional registration body in their disciplines such as BACP or the BPS, and 36 participants were registered with an America-based professional body in their discipline such as the American Psychological Association (APA). Participants' online therapy experience ranged from 1 month to 21 years ( $M= 4.64$   $SD= 4.33$ ). See Appendix G for full tables of demographics and frequency table of participants' years of online therapy experience.

### **4.3. Design**

The present study was designed to assess the predictive capacity of participants' *awareness of key considerations in online therapy* (AKCOT) and motivation in relation to the

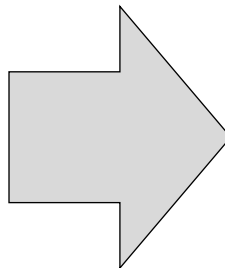
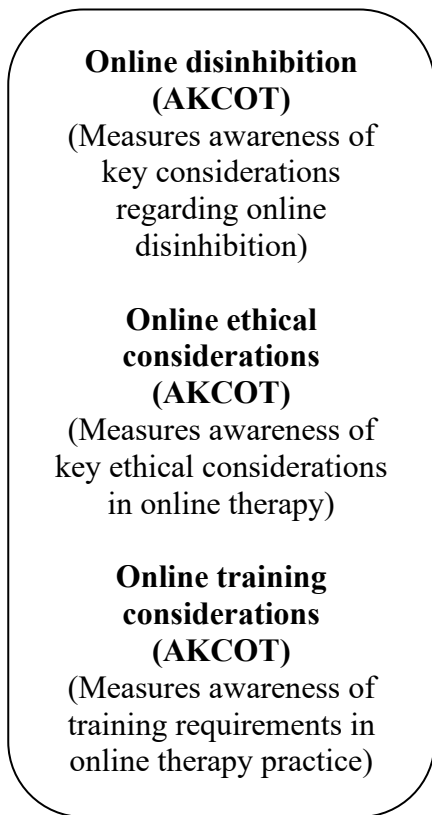
*outcome factors of online therapy use and applications'* (OOTUA). Following the satisfactory homogeneity of variance and the normal distribution tests in the preliminary analysis, all predictors and outcome factors have been inputted into a series of multiple regression analysis (e.g. Best & Wolf, 2014). Two clusters of predictor factors were included in this design. The AKCOT cluster measured participants awareness on *online disinhibition, ethical considerations and training recommendations*. The motivation cluster was measured on three self-determination dimensions (Deci & Ryan, 2000; 2002): *intrinsic motivation, perceived competence* and *general causality-controlled orientation*.

The cluster of the main outcome factors OOTUA measured clinicians' applications as to three aspects of online therapy: *online disinhibition, ethical considerations* and *training recommendations*. OOTUA measured two additional aspects: *diversity of online modes of communication* and *diversity of online security methods*. Figures 4.12 and 4.13 illustrate the methodological design regarding the clusters of predictors regressed onto the OOTUA factors.

**Figure 4.12: AKCOT predictors x OOTUA Factors**

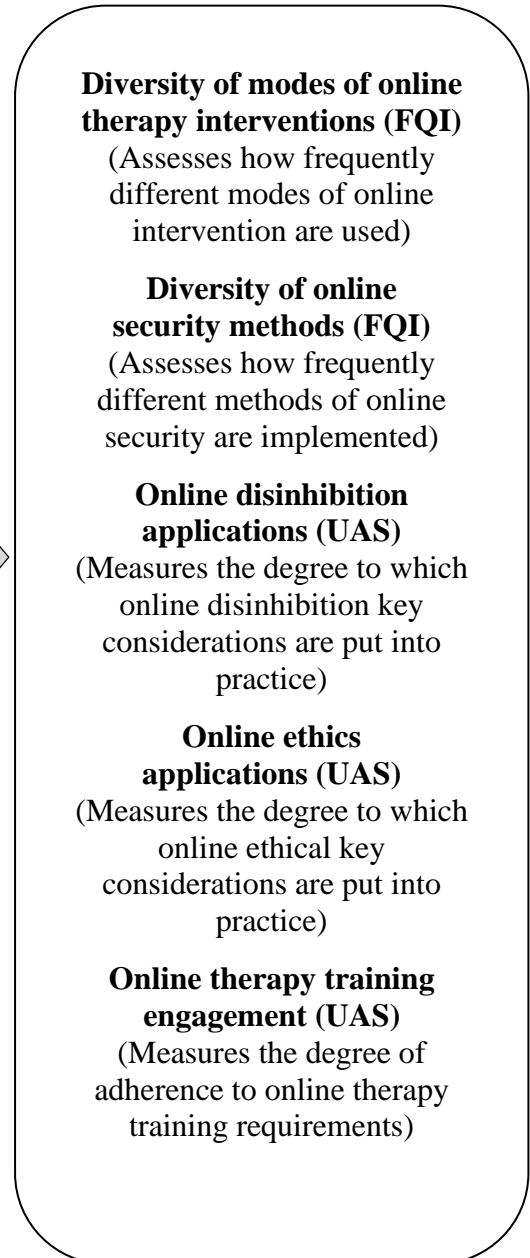
*Predictor factors*

*Awareness of key considerations in online therapy (AKOT)*



*Outcome factors-OOTUA:*

*Usage and applications scale(s) (UAS) and  
Frequency question item(s) (FQI)*





**Figure 4.13: Motivation predictors x OOTUA Factors.**

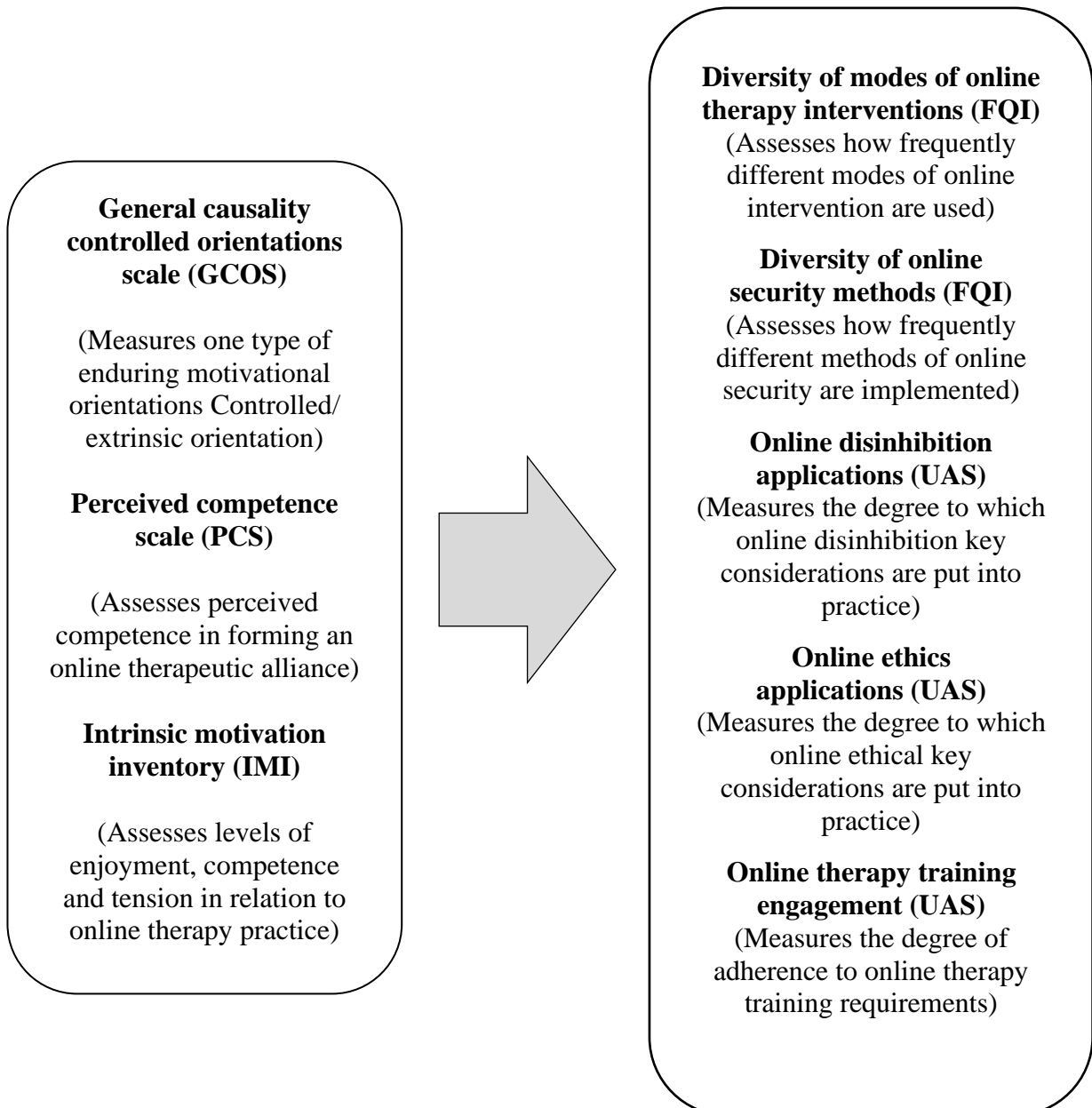
*Predictor factors*

*Motivation factors*

*Outcome factors-OOTUA:*

*Usage and Applications Scale(s) (UAS) and*

*Frequency Question Item(s) (FQI)*



#### **4.4. Materials**

In this section, the materials used to measure the predictor and outcome factors are outlined. Also, the descriptive statistics and Cronbach's alpha values of all study two scales are presented in table 4.3 at the end of this section.

##### **4.4.1. Predictor factors**

###### **4.4.1.1. Awareness of Key Considerations in Online Therapy(AKCOT)**

The AKCOT scales that were devised and used in study one were used in their refined version in the current study, with the aim of assessing whether AKCOT can be linked with clinicians' applications of associated therapy considerations in routine online practice. The current version of the totality of AKCOT scales consisted of eight Likert type items divided into three scales, with one subscale consisting of two items, and two subscales of three items ranging from 1 (*strongly disagree or definitely not*) to 5 (*strongly agree or definitely yes*).

As part of study one's modifications, some text alterations were implemented in study two's questionnaire, in the pursuit of a simplified version of the 'online practitioners' and 'online therapy' terms previously used. The term 'online therapy' was adapted to '*Internet and related technologies for mental health intervention and support*'. The term 'Online practitioners/therapists' was adapted to '*professionals/people who use the Internet and related technologies for mental health intervention/support and supervision purposes*'. These definitions introduced a jargon-free language intending to make the survey's introductory pages, participant recruitment invitations, and some of the items more accessible and user-friendly. These changes impacted only one item among the AKCOT-*training requirements scale*, as follows:

*“Although determining “competence” in the area of online therapy is currently ambiguous, some online therapists think that to deliver internet-based mental health*

*interventions and services effectively, one needs to undergo specialised training in the necessary modes of online communication”.*

Please, see Appendix E for the modified questionnaire with indications as to elements that have been excluded or added as described above.

#### **4.4.1.2. Motivation scales**

##### ***4.4.1.2.1. General causality-controlled orientation scale***

Following the refinement process in study one, the subscale of *controlled orientation* was used from the original *General Causality Orientation Scale* (GCOS-CO). The GCOS-CO is equivalent to the notion of extrinsic motivation and was used here to assess whether *controlled orientation* would predict applications of online therapy key considerations’. The GCOS-CO included eight items ranging from 1 (*extremely unlikely*) to 7 (*extremely likely*) which were based on eight small vignettes depicting life or social situations such as “*You have been offered a new position in a company where you have worked for some time. The first question that is likely to come to mind is...*”. Each vignette has one response which corresponds to a controlled-type reaction “*Will I make more at this position?*” Participants’ scores on each item were averaged, with high scores representing high levels of controlled orientation.

##### ***4.4.1.2.2. Intrinsic motivation inventory(IMI)***

The 9-item IMI was used to explore the relationship between intrinsic motivation and applications of key considerations in online therapy. This scale was used in the same form as in study one. Please refer to study one and section 3.4.1.3. for the description of this scale.

#### **4.4.1.2.3. Perceived competence scale(PCS)**

The PCS aimed to assess whether clinicians' perceived competence in forming and maintaining an online therapeutic alliance would predict the applications of online therapy key considerations. No changes were made to this scale either. Please refer to study one and section 3.4.1.4 for the description of this scale.

#### **4.4.2. Outcome factors**

##### **4.4.2.1. Outcome online therapy usage and applications(OOTUA)**

The OOTUA scales aimed to measure the degree to which online practicing clinicians practically apply key online therapy considerations in routine practice. The refined version from study one was used here consisting of seven items spread across three scales measuring from 1 (*strongly disagree or definitely not*) to 5 (*strongly agree or definitely yes*). High mean scores in each subscale represented stronger applications of each OOTUA factor.

The OOTUA questionnaire was most notably affected by the aforementioned wording alterations. It is important to note, however, that these modifications only applied at the definitional level, impacting only the terms 'online practitioner' and 'online therapy' as described in section 4.3.1.1 and Appendix E. Examples of the adapted items in each subscale follow:

OTTUA-disinhibition applications, was measured using 3 items such as:

*“Based on my experience, I believe that Internet and/or related technologies (in counselling/ psychotherapy) may reduce the client's/patient's psychological defences.”*

OOTUA—ethics applications, was measured using 2 items such as:

*“It is arguable whether one can deliver online mental health interventions only in the country/ territory in which he or she holds a professional license. It is understandable that some online practitioners choose otherwise. To what extent would you consider*

*broadening the scope of your online practice, without obtaining a license in neighbouring countries/territories.”*

OOTUA-online therapy training engagement was measured by 2 items. One item was measured on a Likert scale, which remained unchanged. The other item was a text-entry item requiring participants to write any type of training they had attended that contributed to the development of their online skills. After data collection, this item was transformed into a Likert item (section 3.4.2.1). Its wording was adapted as follows:

*“It is generally recognised that “university-based training in Internet-related technologies for mental health intervention is scarce. Please write any individual training courses (online therapy-related or other) you attended that in your opinion contributed to the development of your skills in using Internet-related technologies.”*

**4.4.2.2. Outcome factors: OOTUA frequency variables, diversity of modes of online intervention and diversity of online security methods.**

To measure the degree to which online clinicians employ *diversity of online security methods*, the same items and multiple-choice options as used in study one (section 3.4.2.2) were used here. Regarding the *diversity of modes of communication*, this item was adapted as follows:

*“We would like to get a general idea of the internet- related technologies you use or have used for intervention or support purposes. Please indicate which of the following do you happen to have used as part of your online practice in the last six months? Please select from the list below.”*

The same list of 22 different modes of online communication that was used in study one was used here too. Some of the options in this list, however, included some additional clarifying text to ensure clarity of meaning. For example, *Smartphone video* is now followed by (*i.e. Facetime, Skype or similar*), whilst *Email* was clarified with the addition of (*one-to-one exchange*) and (*group exchange*). Please, see Appendix E for the modified questionnaire.

#### 4.4.3. Descriptive and Cronbach's alpha statistics

Table 4.3: Descriptive statistics for AKCOT, motivation and OOTUA scales.

	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean(SD)</i>	<i>Cronbach's alpha</i>
AKCOT-Online disinhibition(3-item)	174	1.00	5.00	3.16(.697)	.525
AKCOT-Online ethics (2-item)	174	1.00	5.00	2.84(1.23)	.835*
AKCOT-Online therapy training requirements (3-item)	174	1.00	5.00	3.92(.840)	.702*
GCOS-CO(8 item)	174	1.63	5.63	3.86(.908)	.620
PCS(4 item)	174	1.00	7.00	4.97(1.59)	.926*
IMI(9 item)	174	1.67	5.89	3.69(.988)	.782*
OOTUA-Disinhibition applications(3-item)	174	1.00	5.00	2.74(.893)	.546
OOTUA-Ethical considerations(2-item)	174	1.00	5.00	3.59(1.28)	.843*
OOTUA-Training engagement(2-item)	174	1.00	5.00	2.76(.837)	.325

\*Sufficient reliability (*Cronbach's alpha*  $\geq .70$ )

Descriptive statistics for items *diversity of modes of online communication* and *diversity of online security methods* are reported in table 4.4. Normality histograms and skewness and kurtosis analysis reported in section 4.2 indicate that the data are sufficiently normally distributed and therefore, can be used in the subsequent regression analysis. Please see Appendix H for full frequency tables on these two outcome factors.

Table 4.4: Descriptive statistics for the factors ‘diversity of online modes of communication’ and ‘diversity of online security methods’

	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean(SD)</i>
OOTUA-Diversity of online modes of communication	174	0	18	6.03(3.39)
OOTUA-Diversity of online security methods	174	0	10	3.35(2.96)

#### 4.5. Procedure

Please refer to section 3.5. as the procedure followed here is exactly the same as that of study one. The only differences were some wording adaptations in the online surveys landing page, participation invitations and debrief form. Also, demographic questions came after the consent page with the rest of the question blocks following in the same order as in study one. These adaptations were implemented on the basis of making the questionnaire more accessible and jargon-free. Please, refer to Appendix E for the adopted modifications in these sections of the questionnaire.

#### 4.6. Preliminary statistical analysis

Before proceeding to the results, missing values analysis and item-total correlations are presented in relation to OOTUA *disinhibition applications* and *training engagement*; and AKCOT-*online disinhibition* scales which have shown relatively low Cronbach’s alpha scores, with a view to those being corrected. Validity assessment of all the purpose-built factors, AKCOT and OOTUA, follows.

##### 4.6.1. Missing Values Analysis and sampling adequacy

The raw data was screened to ensure that responses corresponded to the expected range of values and all 174 participant cases were suitable to be used. Missing values pattern analysis revealed that 16 missing values across 10 cases, specifically seven cases missing one

value each, one case missing two values, one case missing three values and one case missing four values. The patterns of the quantitative missing values were tabulated, and the estimated means, correlations, and covariances in relation to the rest of the dataset were calculated. Given these values were missing completely at random (Little's MCAR test: Chi-Square= 336.247,  $df= 334$ , Sig.= .455), they were replaced through the expectation maximisation (EM) procedure (e.g. Lin, 2010).

The current sample was initially assessed for its sphericity and in line with Kaiser and Rice (1974), this would be a key criterion determining whether a factors analysis could be conducted to assess the proposed factor structure (see Figures 4.12 and 4.13) ahead of the main regression analysis. Preliminary Kaiser-Meyer-Olkin (KMO) sampling adequacy tests were found to be KMO= .608 for the AKCOT factors and KMO= .596 for the OOTUA factors (see Appendix L). According to Kaiser and Rice (1974, p. 112), these figures indicate 'mediocre' or inadequate sphericity in the current sample ( $n= 174$ ) implying that it is unsuitable to support a factor analysis procedure. On this basis, it was deemed necessary that an alternative (to factor analysis) approach is adopted in order to refine the current questionnaire and assess its psychometric properties. As such, the Cronbach's alpha approach is employed in this study to assess the reliability of the current factors. Then, in line with Bhattacharjee (2012), a bivariate correlational analysis matrix is produced for each of the factors in the clusters AKCOT and OOTUA to assess the validity properties of the associated purpose-built scales.

#### **4.6.2. Reliability adjusted total correlations**

Item-total statistics for AKCOT-*online disinhibition* indicated that this scale could not be improved via the item removal process. The item-total correlations for all three items in this scale are  $>.20$  which, according to Clark and Watson (1995) and Ferketich (1991) is an indication of a good enough newly devised scale. On this basis, AKCOT-*online disinhibition*



is retained unchanged. Any results based on this factor should be interpreted with caution.

Table 4.5 shows the corrected item-total scale correlation and Cronbach's alpha if item deleted.

*Table 4.5: Cronbach's alpha for AKCOT-online disinhibition(3-item)*

	<b>Corrected item-total scale correlation</b>	<b>Cronbach's alpha if item deleted.</b>
<b>AKCOT-online disinhibition</b>		
Item 1	.293	.516
Item 2	.313	.463
Item 3	.424	.296
<b>Total Internal Consistency</b>		<b>.525</b>

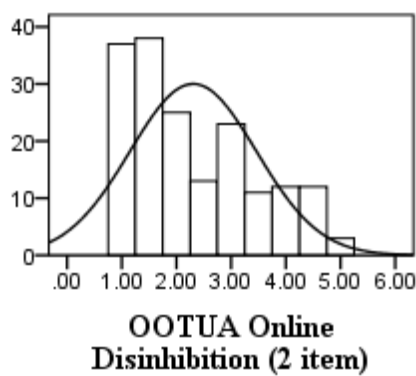
Cronbach's alpha for OOTUA-*disinhibition applications* was improved to .635 with Spearman-Brown  $r = .651$ , after excluding 'item 3'. Eisinga, Grotenhuis and Pelzer, (2013) recommend that the reliability of a 2-item scale is better depicted by a Spearman-Brown coefficient as it provides a more accurate estimation, due to its less restrictive assumptions of inter-item correlation which do not rely on tau-equivalence between the scale items. The improved Cronbach's alpha is slightly lower than .70, but it is acceptable given that each item showed item-total correlation higher than .20 (Clark & Watson, 1995; Ferketich, 1991) (see table 4.6). On these grounds, the 2-item OOTUA-*disinhibition applications* scale is retained. The OOTUA-*training engagement* subscale could not be improved via the method of item removal as it only consisted of two items. (Spearman-Brown  $r = .326$ ). OOTUA-*training engagement* has shown low reliability, but its item-total correlation is shown to be quite close to the threshold of .20. Considering that this scale's data has been deemed sufficiently homogenous and normally distributed, it is decided that this scale is retained so that analysis in relation to the corresponding predictor factor of AKCOT-*training requirements* can be enabled. Results emanating from this outcome factor should be interpreted with caution. Table 4.6 shows the corrected item-total scale correlation for the OOTUA-*disinhibition applications* and *training engagement* retained subscales.

Table 4.6: Cronbach's alpha and corrected item-total scale correlations for OOTUA-disinhibition applications; and training engagement.

Scale	Corrected item-total scale correlation	Corrected item-total scale correlation after item removal
<b>OOTUA-Disinhibition applications(3-item)</b>		
Item 1	.448	.482
Item 2	.467	.482
<b>Item 3</b>	<b>.207</b>	-
Total internal consistency	.546	.635
<b>OOTUA-Training engagement(2-items)</b>		
Item 1	.194	-
Item 2	.194	-
Total internal consistency	.325	-

The distribution of the retained 2-item OOTUA-*disinhibition applications* scale was estimated by calculating the skewness (.636) and kurtosis (-.752) which according to Schmider et al. (2010) indicate sufficiently normally distributed data (e.g. Skew < 2.0 and Kurtosis < 9.0). Figure 4.14 depicts the associated histogram.

Figure 4.14



#### **4.6.3. Validity evaluation of AKCOT and OOTUA scales**

Considering the design of the purpose-built AKCOT and OOTUA scales, it is critical that their convergent and discriminant validity are assessed based on a statistical approach. In line with Bhattacharjee (2012), a bivariate correlational analysis matrix has been produced for each of the factors in the clusters AKCOT and OOTUA. Convergent validity analysis determines the degree to which items within a scale converge to the construct it is intended to measure. As can be seen in the correlation matrix (Table 4.7, values in bold) the correlations between the items within each scale are consistently  $>.15$  and are all statistically significant. This observation signals sufficient convergent validity. The higher the correlation values among the items in each individual scale, the greater their similarity and therefore convergent validity (Bhattacharjee, 2012).

Discriminant validity determines whether the correlation coefficients between the items within a scale are distinctly different from those of other scales. In this case, the lowest correlation value within each scale needs to be higher compared to the correlation values between the items of the rest of the scales. The fact that no violation of this type is observed in (Table 4.7) indicates satisfactory discriminant validity (Bhattacharjee, 2012).

Table 4.7. *AKCOT scales convergent and discriminant validation correlation matrix*

	AKCOT- Ethical reco/ns 1	AKCOT- Ethical recom/n 2	AKCOT- Online disin/on 1	AKCOT- Online disin/on 2	AKCOT- Online disin/on 3	AKCOT- Training recom/s 1	AKCOT- Training recom/s 2	AKCOT- Training recom/s 3
AKCOT- Ethical recom/ons 1	1.000	<b>.718*</b>	-.097*	-.113*	-.262*	.227*	.198*	.102
AKCOT- Ethical recom/ons 2	<b>.718*</b>	1.000	-.150*	-.097	-.162*	.279*	.223*	.141*
AKCOT- Online disinh/tion 1	-.097	-.150*	1.000	<b>.176*</b>	<b>.307*</b>	-.028	-.029	.099*
AKCOT- Online disinh/tion 2	-.113*	-.097	<b>.176*</b>	1.000	<b>.348*</b>	-.162*	-.053	-.078
AKCOT- Online disinh/tion 3	-.262*	-.162*	<b>.307*</b>	<b>.348*</b>	1.000	-.009	.153*	.083*
AKCOT- Trai/ng reco/ns 1	.227*	.279*	-.028	-.162*	-.009*	1.000	<b>.559*</b>	<b>.327*</b>
AKCOT- Trai/ng reco/ns 2	.198*	.223*	-.029	-.053	.153*	<b>.559*</b>	1.000	<b>.441*</b>
AKCOT- Trai/ng recom/ns 3	.102	.141*	.099	-.078	.083	<b>.327*</b>	<b>.441*</b>	1.000

\* *Significant correlation,  $p < .05$*

The correlation matrix evaluating the convergent and discriminant validity of the OOTUA factors is reported in table 4.8. It is noted, that both the convergent and discriminant validity appear to be slightly weak for OOTUA-*training engagement*. This perhaps might be due to the fact that item 2 in this scale was originally a text-based item which was converted into numeric to fit the needs of the statistical analysis. This weakness might have produced some inconsistency on this scale, which is reflected in its low reliability too (Table 4.6).

Table 4.8 OOTUA scales convergent and discriminant validation correlation matrix

	OOTUA- Training recom/s 1	OOTUA- Training recom/s 3	OOTUA- Ethical recom/n 1	OOTUA- Ethical recom/n 2	OOTUA- Online disin/on 1	OOTUA- Online disin/on 2
OOTUA- Training recom/s 1	1.000	<b>.194*</b>	.199*	.271*	-.011	.128*
OOTUA- Training recom/s 2	<b>.194*</b>	1.000	-.098*	-.064	.262*	.286*
OOTUA- Ethical recom/ns 1	.199	-.098	1.000	<b>.729*</b>	-.150	-.145*
OOTUA- Ethical recom/ns 2	.271	-.064*	<b>.729*</b>	1.000	-.122	-.150*
OOTUA- Online disin/on 1	-.011	.262*	-.150*	-.122*	1.000	<b>.482*</b>
OOTUA- Online disin/on 2	.128*	.286*	-.145*	-.150*	<b>.482*</b>	1.000

\*Significant correlation,  $p < .05$

Additional theoretical and statistical observations can be made to evaluate the validity of the AKCOT and OOTUA factors further. As shown in table 4.3 the AKCOT mean scores range around the mark of 3 which is comparable to other studies (such as Cipolletta & Mocellin, 2016; Donovan et al., 2015; Hennemann et al., 2017) which measured knowledge in various aspects of online therapy. Although, expert judges have not been used to evaluate the content adequacy of the items of the AKCOT and OOTUA scales these seem to be aligned with Weitz's (2014, p. 152) list of key online therapy considerations which points to a relatively acceptable level of adequacy. Finally, as demonstrated in the introduction chapter of this thesis, there is a strong theoretical indication that the level of one's awareness would have a predictive effect on the applications of online therapy considerations. In line with Bolarinwa, (2015) if hypothesis testing confirms the expected type of relationship between two factors (in this case, AKCOT and OOTUA), the associated results are regarded as overall

construct valid. As shall be seen in the next section of this chapter, the results generated in this study are to a large degree in alignment with existing theoretical indications signalling, therefore, construct validity in this basic way.

## **4.7. Results**

### **4.7.1. Multiple regression analysis**

A series of multiple regression analysis tested the predictive capacity of the cluster of AKCOT and motivation factors, respectively towards all the outcome factors (OOTUA). The results are presented in relation to each research question. Bonferroni corrections have been applied to investigate the possibility of type one error in the results due to the multiple analysis design employed in this study (see section 4.7.4). All regression analysis and associated tables, figures and plots are included in Appendix K.

#### **4.7.1.1. Multiple regression assumptions**

The key assumption of sufficient sample size was satisfied based on the sample size of  $n=174$  (e.g. Green, 1991; Stevens, 2002). The present study employs six predictors. According to Green (1991), it would require a minimum of 100 participants, which also concurs with the power calculations of study one. The existence of outliers was tested using Hoaglin and Igoowitz's (1987) outlier labelling rule, which uses the multiplier of  $g=2.2$ . These writers have claimed that the commonly used multiplier proposed by Tukey (1977) of  $g=1.5$  (or  $g=3.0$ ) can be too strict (or loose) in identifying outliers. Since SPSS does not offer a utility based on Hoaglin and Igoowitz's (1987) outliers labelling equation, this was calculated by hand for all the predictors and outcome factors. Only one marginal outlier was identified, which, however, was accepted as it satisfied SPSS's  $g=3.0$  multiplier (see Appendix J). Casewise diagnostics were also performed on every regression model individually confirming the conclusion derived by the outliers labelling rule.

The assumption of multicollinearity was satisfied as none of this study's factors indicated particularly strong correlations above  $>.70$  (e.g. Best & Wolf, 2014). Durbin-Watson tests for serial correlations were performed on each regression model and were consistently found to be higher than 1.5 but lower than 2.5, which according to Savin and White (1977) indicates the non-existence of serial correlations. Finally, tolerance levels were always  $>.20$  (e.g. Chatterjee & Hadi, 2015) and the variance inflation factor (*VIF*) consistently lower than 10 (Schroeder, Sjoquist & Stephan, 2016). The residuals' histograms for all the regressions approximated closely, and consistently the 'bell-shaped' depiction of a normal distribution and the normal probability P-Plots straddle the regression lines in a diagonal and roughly linear fashion (see Appendix K).

The assumption of homoscedasticity was regularly monitored through the mean values of the residuals, which were found to be consistently equal to zero. The residuals' scatterplots, however, were not always in a 'bird-nest' shape, often depicting some moderate patterns which pointed to the existence of heteroscedasticity (Best & Wolf, 2014) (See Appendix K). A series of Breusch-Pagan and Koenker heteroscedasticity tests (Waldman, 1983) was performed to ensure that the resulting Beta weights, standard errors and the significance of the contribution of each predictor to the regression models were not biased or violated. The Koenker test is chosen and is reported upon instead of the Breusch-Pagan. The first is cited as being robust in testing residuals that are not perfectly normal within smaller sample sizes, which seems to fit the nature of the current data (Koenker & Bassett, 1982). When the null hypothesis of homoscedasticity was rejected Koenker's  $p < .05$  (Hayes & Cai, 2007) heteroskedasticity-consistent standard error (HCSE) estimator of ordinary least squares (*OLS*) (Hinkley, 1977; Long & Ervin, 2000; MacKinnon & White, 1985; White, 1980) was used to estimating heteroscedasticity-robust standard errors and levels of significance for each predictor. In line with Hayes and Cai (2007), the *HC3* estimator was used to correct the

original standard errors and levels of significance produced in the original regression modes below. Where the homoscedasticity assumption was violated, the unstandardized Beta coefficient and the *HC3*-robust standard errors and significance values are reported, instead of the standardised  $\beta$  coefficient, which is reported when homoscedasticity was not violated. To further explore the nature of heteroscedasticity, the unstandardised residuals for each significant regression were calculated and correlated with the clinical experience of online work (Appendix I). These final calculations are used only for discussion purposes.

Finally, given that the current sample of  $n=174$  consisted of UK-based ( $n=138$ ) and America-based ( $n=36$ ) participants, the variance of each factor in each sample was monitored individually through preliminary multiple regressions analysis. When combining two samples, the different variances may cause the creation of an artificial, composite variance which could mislead the analysis of variance equations within the regression models (e.g. Myers & Myers, 1990). To account for this risk tables 3.9 and 3.10 report the individual *F* values for each multiple regression equation based on the individual and combined samples. These show that in the clear majority of cases, the individual samples' *F* values sum up very close to those of the combined sample. The significance levels of the equations are also coherent. Some discrepancies are observed, but these are attributed to the notably low American-based sample size, which in line with Stevens (2002), barely qualifies for the needs of the current analysis. In this sense, it was deemed safe to analyse the combined sample of  $n=174$  to test the research questions of this study.



Table 4.9: *F*-values associated with the individual UK and America-based samples, and the combined UK and America-based sample. OOTUA factors regressed onto the cluster of AKCOT predictor factors.

Outcome factors	UK sample	American sample	UK and American sample
OOUTA-Diversity of online modes of communication	$F(3,134)= 1.09$	$F(3,32)= 1.56$	$F(3,170)= 1.99$
OOTUA-Diversity on online security methods	$F(3,134)= 4.97^{**}$	$F(3,32)= 4.67^{**}$	$F(3,170)= 8.98^{**}$
OOTUA-Disinhibition applications	$F(3,134)= 18.06^{**}$	$F(3,32)= 7.53^{**}$	$F(3,170)= 24.35^{**}$
OOTUA- Ethics applications	$F(3,134)= 16.79^{**}$	$F(3,32)= 10.95^{**}$	$F(3,170)= 26.93^{**}$
OOTUA- Training engagement	$F(3,134)= 22.20^{**}$	$F(3,32)= 8.23^{**}$	$F(3,170)= 26.09^{**}$

\*\*Significant regression model,  $p < .05$ .

Table 4.10: *F* values associated with the individual UK and America-based samples as, and the compiled UK and America-based sample. OOTUA factors regressed onto the cluster of Motivation predictor factors.

Outcome factors	UK sample	American sample	UK and American sample
OOUTA-Diversity of online modes of communication	$F(3,134)= .281$	$F(3,32)= .588$	$F(3,170)= .623$
OOTUA-Diversity on online security methods	$F(3,134)= 5.68^{**}$	$F(3,32)= 2.66,$ $p = .06$	$F(3,170)= 8.09^{**}$
OOTUA-Disinhibition applications	$F(3,134)= 14.50^{**}$	$F(3,32)= 2.56,$ $p = .07$	$F(3,170)= 16.16^{**}$
OOTUA-Ethics applications	$F(3,134)= 8.79^{**}$	$F(3,32)= 2.48,$ $p = .07$	$F(3,170)= 11.93^{**}$
OOTUA-Training engagement	$F(3,134)= .705$	$F(3,32)= 3.77^{**}$	$F(3,170)= .79$

\*\*Significant regression model,  $p < .05$ .

#### 4.7.2. Multiple regression results - Research question one

The first series of regression analysis considers which OOTUA factors will be significantly predicted by the cluster of AKCOT predictors.

##### 4.7.2.1. OOUTA-Diversity of online modes of communication

The multiple regression model ( $R^2 = .034$ ,  $F(3,170) = 1.99$ ,  $p = .117$ ) that tested whether any of the AKCOT factors would predict *diversity of online modes of communication* was non-significant.

##### 4.7.2.2. OOTUA-Diversity on online security methods

The multiple regression model showed that the AKCOT factors significantly accounted for 13% of the variance in the *diversity of online security methods* used by the participants in routine practice ( $R^2 = .13$ ,  $F(3,170) = 8.98$ ,  $p < .001$ ). It was found that AKCOT *online disinhibition* ( $\beta = .24$ ,  $p < .001$ ) significantly contributed 6% of the model's variance and AKCOT *online therapy training* ( $\beta = .26$ ,  $p < .001$ ) significantly contributed 6% of the model's variance. AKCOT *ethical considerations* of online therapy was not a significant predictor ( $\beta = -.12$ , n.s.).

##### 4.7.2.3. OOTUA-Disinhibition applications

The multiple regression model showed that the AKCOT factors significantly accounted for 30% of the variance in *disinhibition applications* in routine practice ( $R^2 = .30$ ,  $F(3,170) = 24.35$ ,  $p < .001$ ). AKCOT-*online disinhibition* (unstandardized coefficient  $B = .87$ , HC3-robust  $SE = .99$ ,  $p < .001$ ) was the main predictor significantly contributing 27% of the model's variance. AKCOT-*ethical considerations* (unstandardized coefficient  $B = -.075$ , HC3-robust  $SE = .06$ , n.s.) and AKCOT-*training requirements* (unstandardized coefficient  $B = -.003$ , HC3-robust  $SE = .105$ , n.s.) were not significant predictors in this model.

#### 4.7.2.4. OOTUA-Ethics applications

The multiple regression model showed that the AKCOT factors accounted for 32% of the variance in *ethics applications* in routine practice which was found to be statistically significant ( $R^2 = .32$ ,  $F(3,170) = 26.93$ ,  $p < .001$ ). AKCOT-*ethical considerations* (unstandardized coefficient  $B = .51$ , HC3-robust  $SE = .06$ ,  $p < .001$ ) and AKCOT-*online training requirements* (unstandardized coefficient  $B = .243$ , HC3-robust  $SE = .103$ ,  $p < .01$ ) were the main predictors significantly contributing 24% and 3% of the model's variance. AKCOT-*online disinhibition* (unstandardized coefficient  $B = -.43$ , HC3-robust  $SE = .109$ , n.s.) was not a significant predictor.

#### 4.7.2.5. OOTUA-Training engagement

The multiple regression model showed that the AKCOT factors accounted for 31% of the variance in *training engagement* which was found to be statistically significant ( $R^2 = .31$ ,  $F(3,170) = 26.09$ ,  $p < .001$ ). AKCOT-*training requirements* contributed 27% of the variance in the model (unstandardized coefficient  $B = .52$ , HC3-robust  $SE = .06$ ,  $p < .001$ ) and AKCOT-*online disinhibition* contributed 6% of the model's variance (unstandardized coefficient  $B = .26$ , HC3-robust  $SE = .07$ ,  $p < .01$ ). AKCOT-*ethical considerations* (unstandardized coefficient  $B = -.15$ , HC3-robust  $SE = .04$ , n.s.) was not a significant predictor.

### 4.7.3. Multiple regression results - Research question two

This series of regression analysis considers which OOTUA factors will be significantly predicted by the cluster of motivation factors.

#### 4.7.3.1. OOUTA-Diversity of online modes of communication

The multiple regression model ( $R^2 = .01$ ,  $F(3,170) = .623$ ,  $p = .60$ ) that tested whether any of the motivation factors would predict *diversity of modes of communication* was non-significant.

#### 4.7.3.2. OOTUA-Diversity on online security methods

The multiple regression model showed that the motivation factors significantly accounted for 12% of the variance in *diversity of online security methods* ( $R^2 = .12$ ,  $F(3,170) = 8.096$ ,  $p < .001$ ). *PCS* was the main significant predictor contributing 11% of the model's variance (unstandardized coefficient  $B = .63$ , HC3-robust  $SE = .12$ ,  $p < .001$ ). *Intrinsic motivation* (unstandardized coefficient  $B = -.29$ , HC3-robust  $SE = .21$ , n.s.) and *GCOS-CO* (unstandardized coefficient  $B = -.13$ , HC3-robust  $SE = .23$ , n.s.) were non-significant.

#### 4.7.3.3. OOTUA-Disinhibition applications

The multiple regression model showed that the motivation factors accounted for 22% of the variance in *disinhibition applications* which was found to be statistically significant ( $R^2 = .22$ ,  $F(3,170) = 16.16$ ,  $p < .001$ ). *PCS* was the main significant predictor contributing 19% of the model's variance (unstandardized coefficient  $B = .32$ , HC3-robust  $SE = .04$ ,  $p < .001$ ). *Intrinsic motivation* also predicted significantly 2% of the model's variance (unstandardized coefficient  $B = .20$ , HC3-robust  $SE = .08$ ,  $p = .01$ ). *GCOS-CO* (unstandardized coefficient  $B = -.096$ , HC3-robust  $SE = .08$ , n.s.) was non-significant.

#### 4.7.3.4. OOTUA-Ethics applications

The multiple regression model showed that the motivation factors significantly accounted for 17% of the variance in *ethical applications* ( $R^2 = .17$ ,  $F(3,170) = 11.93$ ,  $p < .001$ ). *PCS* was the main significant predictor contributing 14% of the model's variance (unstandardized coefficient  $B = -.30$ , HC3-robust  $SE = .49$ ,  $p < .001$ ). *Intrinsic motivation* (unstandardized coefficient  $B = -.01$ , HC3-robust  $SE = .08$ , n.s.) and *GCOS-CO*

(unstandardized coefficient  $B = -.17$ , HC3-robust  $SE = .99$ , n.s.) were non-significant predictors.

#### 4.7.3.5. OOTUA-Training engagement

The multiple regression model ( $R^2 = .01$ ,  $F(3,170) = .79$ ,  $p = .50$ ) that tested whether any of the motivation factors would predict *training engagement* was found to be non-significant.

#### 4.7.4. Summary of results and associated Bonferroni corrections

This section presents two tables which collate graphically the above results. It also reports on the Bonferroni corrections which have been calculated by hand at two levels as follows, corrected  $p$ -value  $.05/5 = .01^{**}$  and corrected  $p$ -value  $.05/10 = .001^{***}$  (Bland & Altman, 1995). The first level of the Bonferroni calculations accounts for the two separate sets of five comparisons (in the current design AKCOT and motivational factors have been tested separately against five outcome factors). The second level accounts for the totality of the 10 comparisons conducted in this study. As can be seen in tables 4.11 and 4.12 below the majority of the significant findings remained valid beyond the second level of correction  $p = .001$ . There are two instances in table 4.11 and one case in table 4.12 where significant results held up to the first level of correction  $p = .01$ . Based on the limited sample size a few inconsistencies are to be expected, therefore the current corrected results are deemed satisfactory.

Table 4.11: Summary of results and Bonferroni-corrected multiple regression results and individual factor contributions to the regression models in relation to research question one.

OOTUA FACTORS	Multiple regression model including all three AKCOT factors	Individual AKCOT factors' contribution to the model variance		
		(AKCOT) Online Disinhibition	(AKCOT) Online Ethics	(AKCOT) Training Cons/ations
<b>Diversity of modes of Online Therapy Intervention</b>	$R^2 = .034, F(3,170) = 1.99, p = .117$	----	-----	-----
<b>Diversity of Online Security Methods</b>	$R^2 = .13, F(3,170) = 8.98, p < .001^{***}$ 13% of the total variance explained	$\beta = .24, p < .001^{***}$ 6% model contribution	$\beta = -.12, n.s$	$\beta = .26, p < .001^{***}$ 6% model contribution
<b>Online Disinhibition Applications</b>	$R^2 = .30, F(3,170) = 24.35, p < .001^{***}$ 30% of the total variance explained	$B = .87, HC3\text{-robust } SE = .99, p < .001^{***}$ 27% model contribution	$B = -.075, HC3\text{-robust } SE = .06, n.s.$	$B = -.003, HC3\text{-robust } SE = .105, n.s$
<b>Online Ethics Applications</b>	$R^2 = .32, F(3,170) = 26.93, p < .001^{***}$ 32% of the total variance explained	$B = -.43, HC3\text{-robust } SE = .109, n.s$	$B = .51, HC3\text{-robust } SE = .06, p < .001^{***}$ 24% model contribution	$B = .243, HC3\text{-robust } SE = .103, p < .01^{**}$ 3% model contribution
<b>Online Therapy Training Eng/ment</b>	$R^2 = .31, F(3,170) = 26.09, p < .001^{***}$ 31% of the total variance explained	$B = .26, HC3\text{-robust } SE = .07, p < .01^{**}$ 6% model contribution	$B = -.15, HC3\text{-robust } SE = .04, n.s$	$B = .52, HC3\text{-robust } SE = .06, p < .001^{***}$ 27% model contribution

Bonferroni correction was calculated and reported as follows: corrected p-value  $.05/5 = .01^{**}$  and corrected p-value  $.05/10 = .001^{***}$  (Bland & Altman, 1995)

\* significant results  $p < .05$  \*\* significant results  $p < .01$  \*\*\* significant results  $p < .001$

Note: unstandardised coefficient B is reported along with HC3-robust SE, to correct for heteroscedasticity violation (Hayes & Cai, 2007).

Table 4.12: Summary of results and Bonferroni-corrected multiple regression results and individual factor contributions to the regression models in relation to research question two.

OOTUA FACTORS	Multiple regression model including all three predictor factors	Individual motivation factors' contribution to the model variance		
		(PCS) Perceived Com/tence	(IMI) Intrinsic Motivation	(GCOS) Controlled Orientation
<b>Diversity of modes of Online Therapy Intervention</b>	$R^2 = .01, F(3,170) = .623, p = .60$	----	-----	-----
<b>Diversity of Online Security Methods</b>	$R^2 = .12, F(3,170) = 8.096, p < .001^{***}$ 12% of the total variance explained	B = .63, HC3- robust $SE = .12,$ $p < .001^{***}$ 11% model contribution	B = -.29, HC3-robust $SE = .21, n.s$	B = -.29, HC3-robust $SE = .21,$ n.s
<b>Online Disinhibition Applications</b>	$R^2 = .22, F(3,170) = 16.16, p < .001^{***}$ 22% of the total variance explained	B = .32, HC3- robust $SE = .04,$ $p < .001^{***}$ 19% model contribution	B = .20, HC3-robust $SE = .08,$ $p = .01^{**}$ 2% model contribution	B = -.96, HC3-robust $SE = .08,$ n.s
<b>Online Ethics Applications</b>	$R^2 = .17, F(3,170) = 11.93, p < .001^{***}$ 17% of the total variance explained	B = -.30, HC3- robust $SE = .49,$ $p < .001^{***}$ 14% model contribution	B = -.01, HC3-robust $SE = .08, n.s$	B = -.17, HC3-robust $SE = .99,$ n.s
<b>Online Therapy Training Eng/ment</b>	$R^2 = .01, F(3,170) = .79, p = .50$	-----	-----	-----

Bonferroni correction was calculated and reported as follows corrected p-value  $.05/5 = .01^{**}$  and corrected p-value  $.05/10 = .001^{***}$  (Bland & Altman, 1995)

\* significant results  $p < .05$  \*\* significant results  $p < .01$  \*\*\* significant results  $p < .001$

Note: unstandardised coefficient B is reported along with HC3-robust  $SE$ , to correct for heteroscedasticity violation (Hayes & Cai, 2007)

#### **4.7.5. Principle component analysis. An evaluation of the retained factors structure**

The KMO sampling adequacy test had been used as the main criterion justifying the use of the correlational matrix approach, instead of a factors analysis, to assess the robustness of the AKCOT and OOTUA questionnaires and the associated factor structure (e.g. Kaiser and Rice, 1974; Stevens, 2002). It is recognised, however, that there is not always a clear consensus, within the research community, as to the weight that can be given to the KMO test and its benchmark figures (e.g. Hill, 2011). On this basis, a principal component exploratory factor analysis was conducted to further evaluate the validity of the retained factor structure (as emerged from studies one and two). This additional analysis is included in the thesis for purposes of completeness but due to the limited sample size and its sampling adequacy figures, reported earlier, the associated outputs will be interpreted with caution. It is noted that the outcome variables of OOTUA-*online modes of communication* and *online security methods* are not considered as these consisted of a single item each yielding ratio data as opposed to the rest multi-item Likert-type factors.

An exploratory principal component analysis (PCA) without rotation was conducted on the AKCOT items, KMO= .608 (KMO is based on eight retained items as per sections 4.6.2 and 4.6.3) (see Appendix L). This was aimed to assess how the AKCOT factors clustered in study two ( $n=174$ ). The method of unrotated PCA was chosen for its exploratory nature, given that study two employed one group of participants measuring for the first time the constructs that are theorised to underpin the AKCOT and OOTUA questionnaires (e.g. Stevens, 2002). In line with Stevens (2002), this approach will determine how many underlying constructs account for the most variance in the AKCOT and OOTUA questionnaires. Thus, the originally retained factor structure could be cross-referenced and evaluated further. The assumptions of normality, linear relationships, and moderate level correlations between variables were checked and were largely at a low level in relation to the



rest of the variables. All communalities were  $>.30$ , and small coefficients were suppressed to an absolute value below  $.40$  (e.g. Stevens, 2002). Based on the eigenvalues over 1 criterion (Kaiser, 1960), three components emerged regarding the AKCOT questionnaire. The first component accounted for 29.8% of the variance, and the second component accounted for 51.3% and the third component 65.8% of the variance. Table 4.13 displays the items and component loadings, with loadings less than  $.40$  omitted to improve clarity.

*Table 4.13: Factor loadings from Principal Component Analysis without rotation and coefficients suppressed to an absolute value below .4, for AKCOT items (n=174)*

AKCOT items	Component			Communalities
	1	2	3	
AKCOT-Online disinhibition (item 1)		.521		.404
AKCOT-Online disinhibition (item2)			.605	.625
AKCOT-Online disinhibition (item 3)		.726		.654
AKCOT-Online therapy training requirements (item 1)	.682			.637
AKCOT-Online therapy training requirements (item 2)	.638	.525		.718
AKCOT-Online therapy training requirements (item 3)	.480	.502		.538
AKCOT-Online ethics (item 1)	.713		.506	.850
AKCOT-Online ethics (item 2)	.737		.497	.840
Eigenvalues	2.38	1.72	1.16	
% of variance	29.80	51.33	65.83	

The above exploratory analysis illustrates that the AKCOT items load onto three distinct factors. On this basis, the principal components analysis is repeated, requesting three

factors with Direct Oblimin rotation with Kaiser normalisation. An oblique, instead of orthogonal, rotation is preferred here based on Costello and Osborne (2005) who explain that when variable data are expected to correlate to some degree then an oblique rotation is better suited, as it can account for that trend. This applies to the current data and can be seen in the components' matrix (see Table 4.7) and in the fact that these items were designed to index three AKCOT constructs of online therapy: *online disinhibition*, *online ethics* and *online therapy training requirements*. Table 4.14 displays the three-component loadings, with loadings less than .40 omitted to improve clarity.

*Table 4.14: Factor loadings from Principal Component Analysis requesting three factors with Direct Oblimin rotation for AKCOT items (n=174)*

AKCOT items	Component			Communalities
	1	2	3	
AKCOT-Online therapy training requirements (item 1)	.759			.404
AKCOT-Online therapy training requirements (item 2)	.830			.625
AKCOT-Online therapy training requirements (item 3)	.737			.654
AKCOT-Online disinhibition (item 1)		.619		.637
AKCOT-Online disinhibition (item2)		.779		.718
AKCOT-Online disinhibition (item 3)		.737		.538
AKCOT-Online ethics (item 1)			.911	.850
AKCOT-Online ethics (item 2)			.898	.840
Eigenvalues	2.38	1.72	1.16	
% of variance	29.80	51.33	65.83	

The loadings produced by the rotated PCA (Table 4.14) fully confirm the AKCOT factor structure as had emerged from the original preliminary analysis in this study (sections 4.6.2 and 4.6.3) and as part of the regression analysis (section 4.7.2). These results reinforce the validity properties and robustness of the reduced AKCOT scales as used in the present study's main regression analysis. To this effect, table 4.14 shows that the first factor indexes AKCOT- *training requirements* with strong loadings on the first three items. The following three items index the second factor of AKCOT- *online disinhibition* with equally strong loadings. The third factor indexes AKCOT- *online ethics* and loads highly on the last two items in the table.

Next, an exploratory principal component analysis (PCA) without rotation was conducted on the OOTUA items  $KMO = .576$  (KMOA is based on six retained items as per sections 4.6.2 and 4.6.3) (see Appendix L) to further evaluate how the OOTUA factors clustered in study two ( $n=174$ ). The assumptions of normality, linear relationships, and moderate correlations between the variables were checked and were largely at a low level in relation to the rest of the variables (see Table 4.8). All communalities were  $>.30$ , and small coefficients were suppressed to an absolute value below  $.40$  (e.g. Stevens, 2002). Based on the eigenvalues over 1 criterion (Kaiser, 1960), two components emerged regarding the OOTUA questionnaire. The first component accounted for 33.9% and the second component for 60.8% of the variance. Table 4.15 below displays the items and component loadings, with loadings less than  $.40$  omitted to improve clarity.

Table 4.15: Factor loadings from Principal Component Analysis without rotation and coefficients suppressed to an absolute value below .4, for OOTUA items (n=174)

OOTUA- items	Component		Communalities
	1	2	
OOTUA-Disinhibition applications (item 1)	-.562	.486	.552
OOTUA-Disinhibition applications (item2)	-.560	.566	.634
OOTUA-Online therapy training engagement (item 1)		.617	.429
OOTUA-Online therapy training engagement (item 3)		.557	.453
OOTUA-Ethics applications (item 1)	.783		.772
OOTUA-Ethics applications (item 2)	.778	.454	.811
Eigenvalues	2.02	1.61	
% of variance	33.96	60.83	

The above exploratory analysis illustrates that the OOTUA items loaded onto two distinct factors. This indication supports only partially the OOTUA factors' structure which was adopted in the regression analysis (section 4.7.2 and 4.7.3) representing three (instead of two) constructs: *online disinhibition*, *online ethics* and *online therapy training requirements*. This is not surprising, as the two items representing OOTUA-*training engagement* are expected to be limited in loading consistently onto a third distinct construct. These items had already been identified as of limited consistency by the initial scale reliability tests and correlation matrix in sections 4.6.2 and 4.6.3. On the basis of the exploratory PCA above, a rotated PCA was then performed requesting two factors with Direct Oblimin rotation with

Kaiser normalisation. Table 4.16 displays the two-component loadings, with loadings less than .40 omitted to improve clarity.

Table 4.16: Factor loadings from Principal Component Analysis requesting two factors with Direct Oblimin rotation for OOTUA items (n=174)

OOTUA- items	Component		Communalities
	1	2	
OOTUA-Disinhibition applications (item 1)		.731	.552
OOTUA-Disinhibition applications (item2)		.793	.634
OOTUA-Ethics applications (item 1)	.855		.772
OOTUA-Ethics applications (item 2)	.887		.811
OOTUA-Training engagement (item 1)	.566		.429
OOTUA-Training engagement (item 3)		.670	.453
Eigenvalues	2.02	1.61	
% of variance	33.96	60.83	

As expected, the loadings produced by the rotated PCA in table 4.16 show that the first factor seems to index OOTUA-*ethics applications* with strong loadings between the two corresponding items in the middle of the table. The second factors indexed OOTUA-*disinhibition applications* with equally strong loadings between its two corresponding items at the top of the table. As can be seen, each of the two OOTUA-*training engagement* items load inconsistently onto the above two factors failing to cluster under a potential third factor. These results align with the preliminary analysis and the fact that caution had been raised for the factor of OOTUA- *training engagement* (sections 4.6.2 and 4.6.3). Thus, it may be argued that the current PCA results reinforce the preliminary analysis, initially adopted in this thesis

project, pointing to its suitability, reliability and robustness in assessing the psychometric properties and arriving at the retained factors structure.

#### **4.8. Discussion**

The current chapter adopted a series of statistical procedures to test the main hypotheses of this thesis. Based on the achieved sample size the approaches of reduction analysis (Cronbach's alpha approach) and correlation matrixes (e.g. Bhattacharjee, 2012) were deemed most suitable to assess the reliability, validity and robustness of the factors retained through the regression analysis. It has been acknowledged that the commonly chosen approach for this purpose, factor analysis, could not be relied upon due to the limited sample size and the inadequate sphericity detected in the current dataset. However, for purposes of completeness and rigour a principal component analysis (PCA) was conducted, at the end of this chapter, and after the main results have been reported. This was to further ascertain whether the PCA supports the retained factor structure as that had emerged in the main regression analysis. While the PCA provided an added layer of reinforcement as to the factor structure employed (as it was found to support the decisions to retain or exclude various items in this study) it should still be interpreted with caution.

A three-factor structure for all eight retained AKCOT items was evident, based on the unrotated, exploratory PCA. Based on the rotated PCA the three AKCOT factors fitted the theoretical design of the AKCOT questionnaire which indeed was expected to load onto three distinct factors AKCOT *online disinhibition* (3 items; Cronbach's alpha= .52), *online ethics* (2 items; Cronbach's alpha=.83) and *online therapy training requirements* (3-item; Cronbach's alpha= .70). A two-factor structure for all six retained OOTUA items was evident, based on the PCA with Direct-Oblimin rotation which followed the initial, unrotated solution. The two OOTUA factors fitted with some discrepancy the original factor structure of the OOTUA questionnaire which indeed was expected. The two distinct factors were

OOTUA *disinhibition applications* (2 items; Cronbach's alpha= .54), *ethics applications* (2 items; Cronbach's alpha .83), while one problematic factor was highlighted, that of *training engagement* (2-item; Cronbach's alpha= .32). Based on the rotated PCA (tables 4.14 and 4.16) it is suggested that all questionnaire items loaded with remarkable consistency given the relatively small sample size this analysis was based on ( $n= 174$ ). This observation indicates that the decisions made earlier (based on the reduction analysis approach adopted in study one) as to the exclusion and retention of question items have led to a sufficiently robust factor structure. As such, it is concluded that appropriate considerations have indeed been made considering the sampling limitations faced in this thesis project and therefore a suitable approach of analysis was adopted throughout.

Additionally, this conclusion is supported by the fact that PCA largely confirmed the factor structure as used in the main regression analysis. As such it is suggested that since the PCA solution did concur with the initial analyses, sufficient robustness to the scales is indeed evident. Although it is clear from the PCA that the OOTUA-*training engagement* scale was inconsistent, this came as no surprise. Considering the limited sample size a few inconsistencies are to be expected. As explained in section 3.6.4 and 4.6.2, this factor was retained for structural design purposes despite its limitations. Nonetheless, the current indications illustrate that the OOTUA questionnaire, as used in study two, would benefit from further improvement, as it was indeed limited as to its OOTUA-*training engagement* factor. Based on the current PCA, and in hindsight, it would have been better to amend these two items to better index their intended construct instead of retaining them as they were. Results emerging from this factor will be interpreted and discussed with caution for this reason.

Another point of discussion here is that of a potential issue of multicollinearity or autocorrelation among the items of both the AKCOT and OOTUA scales, which could be seen as measuring somewhat similar constructs. Section 3.4.2.1.1 has already explained how

this issue was dealt with at the design stage of the items. Indications for the monitoring of the associated regression assumptions seem to point to the fact that indeed the two sets of scales did not over-correlate and measured sufficiently distinct constructs. It is worth highlighting, however, that the majority of the significant regression models, in study two, violated the assumption of homoscedasticity. In line with Kaufman (2013), this suggests that the variance of residual errors appears to differ systematically across the range of relationships between the factors tested in the hereby regression analysis. This observation further points to the limitations of the sample of study two and underlines further the argument made earlier as to the limited properties of the current sample which was deemed as a counter-indication for factor analysis (e.g. Kaiser & Rice, 1974, p. 112).

Kaufman (2013) explains that the occurrence of heteroscedasticity can be either due to skewed data or due to clusters of cases that might vary as to their error variances. Since data of all factors are not notably skewed (all factors showed skewness of  $< 2.0$ ), it is accepted (based also on Feijt et al., 2018) that the variance of residuals might differ between factors depending on the amount of time (such as years of experience) each clinician has been engaged in online work for (e.g. Feijt et al., 2018). This speculation reflects a potential limitation of the overall research design which has not tested the variable of time (or online experience) as to its meditative or moderative effect, against the relationship of AKCOT and OOTUA. It is reiterated here, as in chapter three that, this type of investigation was originally considered, but later dropped due to recruitment and contextual constraints.

However, given that study two collected demographic data on participants' years of experience working online, the present assumption (as to the potential influence of time on the majority of residuals' plots) could be tentatively tested. This was done by correlating the unstandardised residuals in each significant regression with the data on the participants' experience of online work (e.g. Kaufman, 2013) (Appendix I). It is indicated that there was a



significant positive correlation between participants' years of online experience and the residuals of the models, AKCOT and OOTUA-*disinhibition applications* ( $p < .05$ ); and motivation and OOTUA-*diversity of online security methods* ( $p < .05$ ). Although this observation needs to be tested more thoroughly (and based on larger sample size), it provides a tentative proposition as to the role of perceived competence and experience in online work in relation to the provision of online therapy uses and applications. It is therefore suggested that this effect might have been represented here (at least to a partial degree) in the form of heteroscedasticity. The following chapter will discuss in-depth the main findings of this thesis as they emerged based on the analysis in this chapter.

## 5. Chapter five: Discussion

### 5.1. Introduction

The current thesis project identified and explored clinician-related factors that could predict the provision of online therapy applications, which could promote better client engagement through the online therapeutic alliance. A quantitative design was adopted exploring the links between clinicians' *awareness of key online therapy considerations* (AKCOT) and motivations as the provision of *outcome online therapy uses and applications* (OOTUA). In developing this exploration, the current project synthesised evidence and theoretical concepts that had not been brought together under a quantitative study design before. Its main analysis yielded a series of statistically significant predictive effects, which are discussed in this chapter. According to implementation science principles, the empirical nature of this analysis could have practical implications in guiding future research and encouraging informed debates within the professional community for improving the applications and outcomes of online therapy. Here lies the unique contribution of the current work to the literature which aligns with Trafford and Lethem's (2008) associated criteria. The main results of this thesis project (study two) are now discussed in relation to each research question.

### 5.2. Research question one

Which OOTUA factors will be significantly predicted by the cluster of awareness of key considerations in online therapy (AKCOT) predictor factors?

#### 5.2.1. *Theoretical evaluation of the findings: AKCOT predicts OOTUA factors*

It was found that the three AKCOT predictors (*online disinhibition, online ethics and online therapy training requirements*) consistently accounted for close to 30% of the variance in the corresponding outcomes factors (*OOTUA-disinhibition applications, ethics*

*application and training engagement*). In the current work, *OOTUA-disinhibition applications* represents key online practices that are associated with disinhibited communication online, which is a key element of the online therapeutic alliance (e.g. Dunn, 2014;Kauer et al., 2014). *OOTUA-ethics applications* represents the ethically sound use and applications of online therapy. Finally, *OOTUA-training engagement* refers to the degree to which a clinician has been trained at the specialist level to work online. The current findings support research question one, suggesting that, indeed, levels of awareness of key considerations in a given aspect of online therapy, predict to a notable degree the use and applications thereof.

The current thesis, and hereby discussion, hold a tentative position as to the predictive relationships detected in response to the main hypotheses. Because of the correlational nature of the current analysis, it is difficult to fully separate cause and effect between the factors that have been tested. The hereby analysis detected and reports on the predictive effect of AKCOT and motivation onto OOTUA. But it cannot make a conclusive argument against the possibility that an inverse effect might also exist where OOTUA could be responsible for some predictive effects on motivation and AKCOT. The current discussion, therefore, elaborates on the current findings. The limitations associated with the underpinning correlational design are further discussed in the limitations section at the end of this chapter.

To put these findings in context, it is noted that specialist training in online therapy is considered to be the most reliable avenue, through which clinicians could develop their awareness and knowledge about key considerations in the provision of online interventions (Waugh, 2017; Weitz, 2014). On the other hand, it has been identified that many clinicians hold inaccurate perceptions as to the possible effectiveness and viability of the online therapeutic alliance and safety of online therapies(e.g. Hennemann et al., 2017; Perle et al.,

2013). On the basis of the current findings, it can be stated that clinicians' inaccurate perceptions (as to the key considerations of online therapy) could be associated with inaccurate and ill-informed practices, which are linked to non-credible, non-engaging and largely ineffective online interventions. In line with Vis et al. (2018), this study's statistical confirmation of the predictive relationship between AKCOT and OOTUA provides a key piece of evidence which could trigger a discussion (within the psychological community) as to potential changes, at the professional regulatory and training level regarding the provision of online therapy (e.g. Nilsen, 2015).

The importance of improved regulatory procedures regarding online therapy training is also critical from a theory of planned behaviour (TPB) perspective (e.g. Ajzen, 1991). In that, TPB indicates that the process of endorsing online interventions in routine practice might be underpinned by the effect of peer and normative pressures (Blackmore et al., 2014). As such, it is expected that without a clearly defined regulatory framework around online therapy, peer-circles could accumulate misguided and shared perceptions as to what online therapy entails. Consequently, individuals could be led (due to peer influence) into adopting low-quality and non-credible online practices, failing to facilitate better client engagement online.

This phenomenon could rapidly exacerbate due to the function of online self-presentation principles (e.g. Attrill, 2015). To this effect, clinicians could present false knowledge, skills or even credentials to their online clients due to the protection of the screen, which makes the manipulation of one's online self-presentation possible (e.g. Harrad & Banks, 2015). It is suggested that with a better and more consistently regulated professional context, clinicians' overall understanding and skills in online therapy's key premises could increase, precipitating more uniformity and consistency as to the uptake of online therapy uses and applications. Peer-influence could then reverse becoming

well-informed, positive and constructive supporting online therapists work more effectively and ethically online.

The value of this thesis' contribution to the literature, is further underlined by the fact that the majority of psychologist training programs, are yet to include online therapy modules in their curriculum (Anthony, 2015). This shows that trained psychotherapists and psychologists come out of their core qualifying training with virtually no awareness or knowledge about the most basic key theoretical and practical considerations of online therapeutic practice. From this perspective, the current findings point to the potential usefulness for current psychological training courses to update their curriculum incorporating introductory modules on key online therapeutic premises. Lazuras and Dokou's (2016) work indicates that indeed, even a short introductory course educating clinicians as to what online therapy entails (at a theoretical and practical level) could have a useful effect, improving their provision of online interventions.

With these indications in mind and returning to Mallen et al.'s (2005) call for increased psychological outreach through cyberspace, the current propositions can have direct implications in the field of counselling psychology in the sense that, counselling psychology programs could specifically focus on educating their trainees as to how to increase psychological reach-out and improved access to mental health care through cyberspace. Guiding trainees to recognise and exploit the unique features of cyberspace should become a priority, as it could lead to new ways the social justice and multi-culturalism ethos of the discipline could be realised, both online and offline. On this basis, the current thesis proposes that it is perhaps time to consider online therapy training in more holistic ways, viewing it as part of postgraduate core psychological training, rather than an entity that sits separately to FtF therapies. This would also represent the start of blended care education and training, which seems to be a rapidly evolving area given the nature of online clients'

expectations (especially those of younger generations) (e.g. Kauer et al., 2014; Wentzel et al., 2016).

From a meta-analytic perspective, it may be said that several online domains (even outside psychology) seem to have gone through a period, usually during the first years of their transition from offline to online provision, where their online regulatory policies were vague (or even non-existing). As such, it can take some time before a policy, in any given discipline, develops sufficiently to ensure safety and respectful use of online services. One such example is accessing music or purchasing movies online. These services are nowadays regulated, and the artists' intellectual rights are protected against digital piracy, both online and offline. This, however, was not the case when the Internet and mp3 audio files first emerged. Similarly, it may be said that the transition of psychotherapy in cyberspace is currently at its early stages in terms of its regulatory processes. The current thesis findings take a step facilitating the improvement of these processes aiding the profession of online therapy to take steps becoming a widely established and integrated discipline of psychological intervention.

### ***5.2.2. AKCOT-Online disinhibition predicts OOTUA-Disinhibition applications***

The most commonly reported expectation of the typical online client seems to be associated with the provision of diversified and blended communication which, theoretically speaking, is underpinned by the online disinhibition principles (e.g. Berry et al., 2017; 2019; Dunn, 2014; Kauer et al., 2014; Lal et al., 2015). The current findings indicated that awareness of key disinhibition considerations accounted for 27% of the variance in associated applications.

From Suler's (2016) standpoint, online therapy interventions are aimed to enable previously inhibited parts of the self to be expressed in uninhibited ways. This is possible through the clinician's ability to synthesise flexibly various diverse modes of communication

into a coherent module of intervention, often including text-based communication. As such, the various aspects of the self can be better expressed without being limited to a single channel of communication (such as FtF) (Suler, 2004;2016). As Dunn (2014) proposes beyond its therapeutic effects, this process lies at the core of the notion of the online therapeutic alliance. The current findings suggest that without a basic awareness of the key disinhibition principles and text-based communication, clinicians would be unlikely to exploit this area of online intervention.

As such, limited awareness of key *online disinhibition* and text-based communication considerations could result in the lack of associated applications, thus resulting in an ineffective therapeutic alliance which would be unable to support client engagement (e.g. Alfonsson et al., 2016;Dunn, 2014). These findings align with existing qualitative literature, which has pointed out that clinician's awareness of key premises in a given area of online practice explains associated applications (Feijt et al., 2018; Vis et al., 2018). The current thesis builds on these indications showing that the magnitude of this predictive effect is significant in statistical terms and can be close to 30%, which is quite notable.

Regarding the practical implications of the current findings, it has been debated in the introductory chapter that the process of self-disclosure (which is related to the process of disinhibition) is typically amplified within a trustworthy and safe therapeutic environment which encourages disinhibited self-expression (e.g. Suler, 2004; 2016). Offline therapists are trained to recognise and manage such interpersonal and practical dimensions in the FtF context, but this knowledge is not always transferable online (e.g. Dunn, 2014; Richards & Richardson, 2012). Thus, it may be stated that limited awareness of and provision of online disinhibition-related applications can naturally precipitate not only client dropouts but also limited therapeutic outcomes online.

### 5.2.3. *AKCOT-Ethical considerations predicts OOTUA-Ethical applications*

One of the main practical aspects of any therapeutic relationship online relates to the ethical considerations surrounding professional conduct and deontologically sound practice. These would be key in facilitating a safe, ethical and contained online space for the therapeutic process to take place in. The current thesis found that clinicians' awareness of relevant *ethical considerations* significantly predicted 24% of the variance in associated applications. These findings support Waugh's (2017) proposition that it would be illogical to expect a naïve clinician, who is not aware of the key ethical dilemmas surrounding online therapy to put in place the required precautions. As such, it can be argued that the wider psychological community has an ethical responsibility to seriously consider ways of improving clinicians' awareness of the key ethical considerations associated with online therapy. As indicated here, improved awareness would be enough to promote some positive change as to clinicians ethical decision-making and associated actions online. In line with earlier propositions in the current thesis, integrating introductory modules into all psychotherapy training courses could be a viable option helping to raise trainees' awareness as to the ethics of online work.

One of the most crucial dilemmas associated with online therapy refers to whether a clinician can offer online interventions to clients who reside in a different country (Weitz, 2014). Consider the following example: an offline (long term) client of a therapist wishes to attend some online sessions due to having moved area of residence, or due to being on long-term holidays in another country. There are several incentives that could lead the therapist accepting such a request (e.g. Harrad & Banks, 2015). A key question that needs to be asked, however, is whether this therapist is able to legally and ethically safeguard and contain the process of therapy as it shifts online. As derived from Weitz (2014b), the potential answer to this question would be complicated, especially when the therapist is not trained in managing



such dilemmas, and therefore might even be unaware of their existence. The current findings suggest that with some basic awareness, as to the key risks associated with this client request, the offline clinicians would be able to be appropriately cautious online.

Beyond the factor of risk, it can be argued that ethically-informed practices online are a matter of credibility and viability, thus are associated with the client engagement (e.g. Dunn, 2014; Alfonsson et al. 2016). Young people, for instance, have already expressed attitudes of preference towards online interventions, especially text-based communication (e.g. Berry et al., 2017; Kauer et al., 2014). It should not come as a surprise to any therapist that one of their clients might wish to have instant messaging interventions, for example, blended into their ongoing offline treatment plan. Therapists nowadays should be in a position to make appropriate arrangements and know how to accommodate safely and ethically the various client requests regarding the varied modes of online interventions. Otherwise, they can fall behind in their ability to fully meet the online client's evolving needs and expectations for a credible person-to-person connection, through both offline and online modes of communication (e.g. Baumeister et al., 2014).

#### **5.2.4. *AKCOT-Training requirements predicts OOTUA-Training engagement; and joint effects***

The current thesis reported that *engagement with specialist training* was predicted (27%) by *AKCOT-training requirements*. This finding suggests that raising clinicians' awareness as to the limits of their scope of competence, and as to what sort of specialist qualifications one needs to practice online, would be a key in guiding them to engage with the associated training requirements. This proposition provides a possible solution to Perle et al.'s (2013) observation that clinicians might hesitate seeking specialist training, even if they knew that online work stretches their competencies beyond their limits. As outlined in the introduction chapter through the work of Blackmore et al. (2014) and Harrad and Banks

(2015) clinicians would have several motives and reasoning for not complying with existing specialist training guidelines (e.g. ACTO, 2009). A well-designed introductory module that aims to familiarise trainees with common ethical dilemmas would inevitably familiarise them with the minimum training requirements in practicing online; and even with some key, basic cyberpsychology concepts that apply to psychotherapy online (such as online disinhibition).

As such a secondary finding in the current thesis' can be that, the degree to which one knows about one aspect of online therapy impacts the amount they know in other neighbouring aspects and the applications thereof. For instance, *OOTUA-training engagement* was predicted jointly by *AKCOT-training requirements* (27%) and *online disinhibition* (6%). This was also the case with *OOTUA-ethical considerations* which was jointly predicted by *AKCOT-ethical considerations* (24%) and *AKCOT-training requirements* (3%). On this basis, it can be said that the fact that one is aware of the key online therapy *training requirements* is likely that they have also become aware of the importance of training in terms of *disinhibition applications* and *ethically* informed practices online. Based on the joint predictive effect demonstrated by the AKCOT predictors, it can be argued with some confidence that the proposed improvements at the training and regulatory scene of online therapy would be enough to positively influence further changes across the various key areas of online therapy provision.

It is worth noting, however, that *OOTUA-disinhibition applications* was only predicted by *AKCOT-online disinhibition* and not by *AKCOT-training* or *ethical considerations*. This inconsistency in terms of joint effects seems to provide an insight as to the nature of online disinhibition. Online disinhibition can be said to represent a more niche technical aspect of online therapy in comparison to the rest of the factors explored here. In Dunn's (2014) view, applications of online disinhibition imply an advanced set of relational and communicational text-based skills that are crucial to the formation of a sound online

therapeutic alliance (see also Suler, 2016). As such, it can be suggested that raising clinicians' awareness in online disinhibition to the point that a significant change in associated areas can be observed, is likely to require more advanced procedures including skill-based and theoretical educational components. In that, a simple educational, introductory module might be better placed to facilitate awareness of credibility-related practices that might not underpin advanced areas of intervention such as online disinhibition.

#### **5.2.5. *AKCOT factors and OOTUA-diversity of online security methods and modes of communication***

*OOTUA-diversity of online security methods* was found to be significantly predicted by *AKCOT-online disinhibition* (6%) and *training recommendations* (6%). As can be seen, a predictor specifically measuring awareness of online security methods was not included in this model, and yet a significant effect was generated. The point made earlier as to the inter-related effects of awareness on various aspects of online therapy is demonstrated here. It is suggested that by utilising an array of diverse methods of security and working transparently in accordance to GDPR regulations, the online therapists could facilitate a sense of trustworthiness, credibility, professionalism and containment which could help the client express themselves in uninhibited ways in therapy (e.g. Dunn, 2014). This point has also been discussed earlier in relation to *OOTUA-ethics applications*. In this sense, it may be stated that there is an interpersonal pre-requisite to online disinhibition, which in practical terms refers to the clinician's ability to take appropriate measures establishing an ethically sound and safe space for therapy to take place in (e.g. Dunn, 2014). As such, their clients can feel safe opening up and being vulnerable in the therapeutic encounter.

*AKCOT-training requirements'* predictive effect on *OOTUA-diversity of online security* can also be explained in terms of knowledge inter-relatedness. For instance, if one has done some research, on their own volition, as to the key training requirements of online

therapy, they would also be likely to have found out about the various security considerations and methods associated with that. In the context of the current project, however, it is important to note that data collection took place two months after the latest GDPR regulations were officially launched in May 2018. During that period, many clinicians found out (perhaps for the first time) about the various measures needed to ensure GDPR-compliance of their professional digitally-based procedures. It is likely, therefore, that the GDPR campaign might have had an external effect raising clinicians' awareness as to the methods of security and training requirements, that are typically expected online and by the associated regulated bodies. It may be possible that this process has been reflected, to some degree, in the occurrence of the current predictive effect in relation to OOTUA-*diversity of security methods*.

Contrary to initial expectations, the cluster of AKCOT predictors did not show any significant effect in relation to OOTUA-*diversity of modes of communication*. Participants (Table 3.5), reported using six modes of communication, on average, out of the 22 that were included in this question item (such as video-conferencing, telephone and email). These six, were all modes of communication that clinicians are commonly familiar with due to their uses in day-to-day social situations. As such, the lack of significance could indicate that the use of these modes of communication might not be necessarily related to the specialist areas of online therapy explored in this project.

While the lack of significance here was not expected, it is not surprising either. As Blackmore et al. (2014) and Feijt et al. (2018) indicated, clinicians with low or no training (or knowledge) in CMC communication tend to remain attached to those modes of communication they are familiar with. The vast majority of the participants in study two (135 out of 174) reported practicing online with no relevant training in online therapy. Descriptive statistics of study two also showed that participants did not score high in terms of

their awareness in the various aspects of online therapy and the applications thereof (see Appendices G and H.). Before elaborating theoretically on this observation, it is worth noting that the current descriptive statistics are unique as no other research has been able to record and provide an official indication of the proportion of clinicians who actually practice online without having had specialist training.

From a theoretical perspective, as suggested by Suler (2016), *diversity of modes of communication* is a central premise to the process of online disinhibition and contributes to the development of a sound therapeutic alliance (Dunn, 2014). It also maps onto central expectations of online clients (Berry et al., 2019; Kauer et al., 2014). Therefore, it is critical in terms of the client engagement-oriented provision. The lack of significance here indicates that the average use of six modes of communication was not underpinned by disinhibition-related intentions. In other words, participants did not seem to use their chosen modes of communication online to encourage online disinhibition in therapy. Rather it appears more likely that the use of these modes of communication was aimed simply to create an online therapeutic presence for the clinician (Blackmore et al., 2014).

### **5.3. Research question two**

Which OOTUA factors will be significantly predicted by the cluster of motivation factors.

#### **5.3.1. Theoretical evaluation of the findings- Motivation predicts OOTUA factors**

##### **5.3.1.1. Perceived competence predicts OOTUA factors**

It was found that the three motivation predictors (*general causality-controlled orientation(GCOS-CO)*, *perceived competence scale(PCS)* and *intrinsic motivation inventory(IMI)*) consistently accounted for approximately 10-20% of the variance in the three outcomes factors *OOTUA-disinhibition applications*, *ethics application* and *diversity of online security method*. The factor of *perceived competence* appeared to be the most

consistent, contributing significantly towards OOTUA-*diversity of security methods* (11%), *ethical* (14%) and *disinhibition applications* (19%).

In line with, Montano and Kasprzyk, (2015), the current thesis suggested that *perceived competence* would predict online applications of therapy due to the low volitional control attributed to clinicians regarding the adoption of online interventions. Online therapy is said to fit the description of an area of low volitional control for two reasons. Firstly, online therapy is a specialist area of therapeutic practice, which as has been seen, in the introduction chapter, puts increased technical demands on clinicians. Secondly, access to online therapy specialist training is not widely available, within core psychotherapeutic training courses, which make it likely that volitional control would be low for the majority of online practising clinicians. This proposition has been confirmed in the current study, which has shown that almost three in five online practicing clinicians reported having no specialist training in online therapies (Appendix G and H). In this context, perceived competence is seen as part of perceived behavioural control (PBC) and as expected has been found to be significantly associated with clinicians' provision of *disinhibition applications*, *ethics application* and *diversity of online security methods*.

Wilson et al. (2013) proposed that levels of knowledge and understanding of the risks associated with key aspects of a given intervention could predict intentions to use and the actual use thereof. With this premise in mind, it is suggested that clinicians' skills, understanding and competencies in building an online therapeutic alliance are expected to be linked to the endorsement of associated provision (e.g. Vis et al., 2018). While confirming this premise; the current findings, seem to be building upon Wilson et al.'s (2013) indications suggesting that *perceived competence (specifically)* might be an even more accurate determinant of the uptake of certain behaviours and interventions associated to the development of an online therapeutic alliance. In that, it is possible that one might have the

theoretical understanding as to how to deliver an intervention online, but they might not feel competent in putting that knowledge into practice (see also Bandura, 1977; 1982). In this sense, the current findings support the opening position of the current thesis, which posed that, it is not enough for clinicians to intend to work online, they would most importantly need to perceive themselves as competent in putting associated considerations into practice, in order for their knowledge and intentions to be translated into actual practice.

The current findings provide an added insight as to the nature and key aspects of the online therapeutic alliance. The *PCS* was specifically adapted to measure *perceived competence* in forming an online therapeutic alliance which, according to Dunn (2014), represents a highly technical endeavour. As such, the practical uses and applications that are associated with the significant regressions, on the present outcome factors, might provide an insight as to the specific aspects that underpin clinicians perceived competence, in establishing a meaningful alliance with their clients online. As such, it is indicated that the clinician's ability to establish a secure, ethically sound and disinhibiting connection with their clients, is associated with their perceived competencies in establishing an online therapeutic alliance (e.g. Alfonsson et al., 2016; Dunn, 2014). In other words, the three significant outcome factors identified here, represent the key premises of the online therapeutic alliance as those have been highlighted throughout the current thesis. These refer to the underlying principle of online disinhibition, which is enhanced within a secure and ethically sound space for online therapy to take place in.

The current findings could be usefully considered by key professional and regulatory bodies such as the BPS and BACP. There is indeed some value in requiring that online practising clinicians are equipped with the specialist knowledge and skills needed to effectively and competently work online. As has been proposed in the introduction chapter, while some clinicians may be aware of their need for specialist training, the effect of various

psychological and motivational mechanisms might lead them working online nonetheless (e.g. Blackmore et al., 2014; Harrad & Banks, 2015; Perle et al., 2013). A regulatory framework that sets a threshold of minimum training requirements, for anyone who wishes to work online, is likely to make online therapy provision more consistent and effective. With such changes in place, it is likely that online therapy could achieve better client engagement, especially at the early stages of therapy, and eventually increase the chances of better therapy outcomes online (van der Vaart et al., 2014;Wentzel et al., 2016).

### **5.3.1.2. *Intrinsic motivation and PCS predict OOTUA disinhibition applications***

A similar interpretation is also reflected in the fact that *intrinsic motivation* (2%) predicted *OOTUA-disinhibition applications* jointly with *perceived competence* (19%). Deci and Ryan (2000; 2002) suggest that intrinsic motivation consists primarily of one's interest, enjoyment, perceived usefulness in performing an activity. From technology acceptance perspective (TAM) (Davies, 1989) intrinsic motivation maps onto the notion of *perceived usefulness*, which is linked to the expected value associated with the endorsement of CMC in routine practice. Deci and Ryan (2000; 2002) indicate that perceived competence would bring about better therapy outcomes in the long-run (for the individual therapist), resulting in higher perceived usefulness and value of continuing to use online interventions. As suggested earlier, however, a clinician who has not undergone sufficient training will be less likely to perceive themselves as competent. Therefore, their online effectiveness and therapy outcomes would be limited. Hence, their intrinsic motivation would also remain low. This means that they would not have any interest in further expanding on their online therapy knowledge, skills or provision.

The intrinsic motivation's significant predictive effect on *OOTUA-disinhibition applications* provides an added layer of understanding as to the nature of the online therapeutic alliance and the notion of online client engagement (from a clinician's



perspective). It appears that a clinician would need to see (actual usefulness) that their overall online therapy outcomes are satisfactory before they can feel motivated investing in further expanding their skills and online provision. This would be by endorsing more advanced and diversified disinhibition-related interventions. Deci and Ryan (2000; 2002) suggest, however, that intrinsic motivation is predicted positively by perceived competence. In this sense, perceived competence appears to be the main driving force underpinning intrinsic motivation and seems to play a primary and critical role in predicting the adoption of key online therapy uses and applications. The recognition of perceived competence (as part of intrinsic motivation) as a key determinant of online therapy applications has not been highlighted in the literature before. As such, this interpretation consists of a key addition to the existing literature which has been provided by the current thesis and has been possible due to the use of SDT framework (Deci & Ryan 2000; 2002) (in addition to TPB and TAM).

In a closely relevant study, Feijt et al. (2018) identified awareness and intrinsic motivation as the main determinants of online therapy uptake, but they did not provide a detailed, and statistically supported, description as to the process underpinning the functions of these two determinants. These researchers suggested that there is a gradual shift from limited awareness of key considerations (at the early stages of adoption) to intrinsically motivated online therapy applications (at the later stages of adoption), which is underpinned by the amount of time one has been involved in online work for. While Feijt et al. 's (2018) model is insightful, it does not capture clearly the role of *perceived competence*, which according to Deci and Ryan (2000; 2002) is inextricably linked to intrinsic motivation.

The current thesis clarifies that the dimension of time (in Feijt et al., 2018) implies an accumulation of experience and specialist knowledge (over time), which is linked to increased *perceived competence*. In other words, perceived competence is suggested to play a mediative role to the gradual shift from the limited adoption of online interventions, to an

expanded and advanced (intrinsically motivated) level of uses and applications thereof. To see how the current thesis solidifies and expands on this speculation the following example is considered: it is possible for a clinician to be working online in a sporadic, opportunistic fashion for many years without having any interest in further diversifying the interventions they offer. In this case, the influence of the dimension of time alone (and the accumulation of positive experiences and knowledge, as per Feijt et al., 2018), seems limited in explaining why a shift from the limited (using only video-conference sessions for instance) to the expanded and diversified use (using diverse modes of intervention) of online interventions, is not guaranteed to happen for some clinicians over time.

Considering the current thesis findings, however, it may be said that this clinician's (in the above example) perceived competence in using expanded and diverse online interventions was low. Therefore, they would not have any interest in seeking to expand on their online provision, despite the fact that they might have several years of experience working online. As it follows, it is likely that their perceived usefulness in expanding their online provision was also low. In SDT terms, this would translate into a lack of intrinsic motivation which is a necessary prerequisite for professional growth, through endorsing new and advanced ways of working (online). In this sense, the current findings add onto Feijt et al.'s (2018) work proposing that unless the passage of time is associated with the conscious accumulation of perceived competence in one's abilities to utilise online disinhibition applications and an active motivation, in expanding one's skills. It is therefore unlikely that the factor of time and experience alone could explain meaningfully the uptake of key diversified and disinhibition-related applications of online interventions.

Returning to the opening problem of online client dropouts, the literature has shown that credibility and therapeutic alliance are key elements of client engagement. Dunn (2014) has argued that the therapeutic alliance is based on a set of higher-order, advanced online

relational and text-based skills, which are underpinned by the process of online disinhibition. It can be proposed, therefore, that intrinsically motivated online practicing clinicians would be more likely to endorse text-based and other online disinhibition related interventions in routine practice. The current findings suggest that online therapy providers (individual therapists and organisations) could redistribute their resources focusing on actively seeking more specialist training, which would equip them (and their therapist employees) increasing their perceived competence in forming an online therapeutic alliance. This would, in turn, increase the consistency and quality of care provided online, promoting better client engagement (see also Anthony, 2015; Weitz, 2014). As such better-regulated practice online would be a catalyst (from professional bodies perspective) in increasing the opportunities for reaching out and engaging individuals that otherwise would not have sought FtF mental health support.

#### **5.3.1.3. *Extrinsic motivation does not predict OOTUA factors***

The next point of discussion refers to the observed lack of significance in relation to the predictor of extrinsic motivation, which was measured using the general causality orientation scale- controlled orientation GCOS-CO (Deci & Ryan, 2000; 2002). The lack of significance here is in discord with existing literature which suggests that clinicians might be extrinsically motivated endorsing (or not) online interventions, due to peer influence or increasing demand (e.g. Anthony et al. 2018; Attrill, 2015; Harrad & Banks, 2015). With strong indications in this direction, the observed lack of significance is primarily attributed to the nature of the scale used (GCOS-OS).

The GCOS-CO scale was extracted from a bigger questionnaire assessing three aspects of motivation: intrinsic, extrinsic and impersonal orientations. This instrument, however, conceptualises these motivational orientations as enduring characteristics of personality which are independent of any given behaviour, in this case applications of online

therapy (Deci & Ryan. 2000; 2002). This premise might have led to the current lack of significance, as intrapersonal and enduring aspects of extrinsic motivation characteristics, of the current project's participants, may indeed not be related to their uses and applications of online interventions. It appears more likely that a view of motivation that was related to the behaviour of adopting online interventions itself might have been more useful.

From TPB perspective, however, it may be said that lack of significance may be attributed to the lack of subjective norm and potential external rewards that could underpin the professional identity of the typical *online therapist* (e.g. Ajzen, 1991). In this sense, it may be said that the identity of the *online therapist* is generally not clearly defined among online practicing clinicians, so it could not generate peer-pressure in relation to certain behaviours. As such, it is difficult for subjective pressures to be triggered with sufficient magnitude generating a significantly observable effect in the hereby regression equations. The fact that a decision was taken ahead of study two to adopt a looser definition as to who is considered an online therapist and, therefore eligible to take part, might not have helped matters in this respect. The benefit of that decision, however, was that it enabled better access and representation of those clinicians who engage with diverse forms of online therapy across different settings, realising as such the current project's intended research exploration.

### **5.3.2. *Theoretical evaluation of findings: Motivation does not predict diversity online communication and engagement with online therapy training***

*Diversity of modes of communication and engagement with training* were not predicted significantly by any of the motivation predictors, which is in discord with earlier research (e.g. Du et al. 2013). As indicated earlier, the more experienced one would be working online, the more familiar they would get with online practices, and their perceived competence would become the main factor associated with the adoption of online therapy tools. It may be that some participants in the current sample only endorsed online

interventions on an occasional basis. This could mean that they are still at the early stages of their online career, which is typically associated with limited knowledge and experience.

According to Feijt et al. (2018), participants at this stage would tend to use fewer modes of communication; they would be largely unaware of the key considerations and the prospect of online interventions. As such, and as the current thesis poses, they might not be intrinsically motivated to expand and diversify their scope of practice. However, descriptive statistics (see Appendices G and H) show that only 30 (out of 174) participants in study two had less than one's years' experience working online. This figure is not big enough to fully justify the lack of significance here. As such, it is indicated, that more than one year's online experience would typically be required before one's perceived competence and intrinsic motivation start to grow enabling the adoption of diversified CMC in routine practice.

A meta-interpretation of the current lack of significance might be rooted in the clinicians' general tendency of remaining attached to their offline therapist identity, which makes them adhere to associated subjective norms (e.g. Blackmore et al., 2014; Du et al., 2013; Mallen et al., 2005). As it follows, it can be assumed that the current participants might have not identified as online therapists whatsoever. This implies that they did not internalise a sense of identity, which might be related to the online-based professional community or subjective norm. Therefore, their extrinsic motivation was perhaps left in conflict. The offline therapist's perceived sense of identity is not associated with the adoption of flexible, diverse and multi-modal communication because offline work happens through the single, FtF modality of communication. This interpretation brings an added layer of understanding to Blackmore et al.'s (2014) suggestion as to why online practicing clinicians tend to remain attached to familiar modes of intervention online. This is a critical point (and is linked to the lack of significance as to extrinsic motivation) of consideration for the psychological community. It points to the need for a more holistic, inclusive and blended care-oriented view

of online therapies, which could encourage a more coherent and accessible sense of the professional identity for online practicing clinicians, within the current mental healthcare landscape.

Regarding the non-significant result as to *OOTUA-engagement in online therapy training*, it is proposed that this factor could have been more meaningful as a predictor rather than an outcome factor. In line with SDT, it is likely that engagement with online therapy training increases one's intrinsic as well as extrinsic motivation through the function of perceived competence in online therapy applications. Switching *engagement in online therapy training* from outcome to a predictor factor could also provide findings that support the main assumption underpinning the present discussion, and overall thesis, which maintains that specialist training improves perceived competence which in turn (and as found in study two) predicts provision in online therapy applications.

A final potential explanation of the lack of statistical support here is related to the low reliability associated with the *OOTUA-training engagement* scale (Table 3.6.). To deal with the potential risk of over-claiming knowledge and engagement with specialist training, one of the items in the *OOTUA-training engagement* scale was an open-ended question that asked participants to report three online therapy-related training courses or activities they have attended, in the last few months. Responses to this item were coded and converted into quantitative data (subsection 2.4.1.1). It may be possible that the final data generated by this method compromised to some degree the reliability of this scale, providing limited and not homogenous variance, which might have impacted the current findings.

#### **5.4. Critical evaluation of the project and limitations**

A key aspect for the critical evaluation of this thesis relates to the use of implementation science premises as the underpinning framework for the current quantitative exploration. As such, among the primary aims of this thesis project was to generate empirical

results that could provide indications as to future directions in online therapy applied practice and research. On this basis, the above discussion and findings could provide indications as to steps that need to be taken by the psychological community in improving the application, regulation and effectiveness of online therapies. It may be said that the current thesis attended effectively to these dimensions of new knowledge. Its results supported the initial hypotheses highlighting statistically significant relationships between the factors tested.

Given the fact that this a largely unexplored area, and even less in empirical research terms, in line with Nilsen (2015) and the implementation science framework, the contribution of the current thesis as it stands it is valuable and has the potential informing future directions of research and practice. It is maintained, however, that further investigation and more research will be required in achieving a complete understanding of the subject matter in order to achieve a drastic and immediate shift in the way online therapy key considerations are implemented at various professional levels. Future research that might seek to assess clinicians' online therapy provision using a more extended empirical and indirect knowledge tests would need a theoretical and research basis to build upon. While the current thesis did not provide conclusive findings, its results and methodological design could be used in informing future research in that direction.

In addition, more research will be needed to expand on the findings reported in the current thesis, as more evidence will be needed to facilitate relevant changes at the applied professional level. It is important to note that a professional doctorate thesis, such as the present one, takes place within a time-limited and constrained context and therefore its aims and the scope affecting change is often limited. It was deemed, however, valuable to pursue the empirical paradigm, underpinned by the implementation science framework, seeking to understand applications of online therapy in a way that was not attempted before and providing a few initial indications towards greater understanding in that direction. As with

any research project, each phase is important and should provide an impetus for future research. The nature of the time-limited work completed for this thesis is intended as such. It is not intended to provide a concluding paradigm for immediate shifts within the counselling psychology profession, but to indicate a need for a wider consideration of factors important to the world of online therapy. To this end, the thesis contributes stepping-stones towards a wider understanding of online therapy practices that warrant further empirical exploration. This was the central aim of this body of work, and it can be concluded that this has been achieved. In this light, it is worth discussing in more detail the specific limitations of the thesis as this could also provide some valuable points regarding the current but also future works.

The fact that study two combined UK and American-based samples which were found to be significantly different as to the intrinsic and extrinsic motivation mean scores (Table 3.1) may be considered as one of the limitations of this study. This is an issue that needs to be held in mind throughout the current discussion, as to the limited significance in relation to these two factors. Those differences might have produced an additional inconsistency in the mean values resulting in a failure to detect levels of significance that might possibly exist (otherwise known as type two error). However, it is noted that the provisional regression analysis that tested the research hypotheses under each individual sample (as well as the combined samples) identified no differences in the significance levels associated with the IMI and GCOS-CO (see tables 3.9 and 3.10). This observation provides support towards the current results, advocating against the possibility of a type two error.

Nonetheless, it is noted that the approach taken towards the development of AKCOT and OOTUA questionnaires (as outlined in section 2.4.) (Foster & Parker, 1995) had a key limitation. It relied on assessing the reliability of the scales by deleting items rather than assessing and refining those in a pilot study. Omitting a pilot study resulted in some



problematic items being identified only after the first attempt of data collection, forcing their deletion. This has led to some initially included factors such as *AKCOT-cyber-therapy theory* or *online security considerations* remaining unexplored in the main study. Additionally, some of the scales used in study two did not reach the necessary reliability benchmark (table 3.5 such as *AKCOT-online disinhibition* and *OOTUA-training engagement*); which also dictates that results related to these factors are interpreted with caution. It is possible that these issues could have been prevented by adopting a different approach to building the study questionnaire, such as assessing the coherence and wording of the items, by seeking input by experts in the field of online therapy. Pilot testing the questionnaire on an indicative sample and determining the index of discriminatory power (e.g. Foster & Parker, 1995 ) between the items, could have been a more efficient approach in arriving at the final items.

Another limitation lies in the decision to utilise self-reported measures to assess the AKCOT and OOTUA factors consists of a potential weakness of this project's design. Even though the social desirability threat was accounted for, during the development phase of these scales; it is impossible to determine the degree to which some response bias might have impacted the data (e.g. Rosenman, Tennekoon & Hill, 2011). In addition, employing scales of less than 3-item scales provided limited control over the potential issue of response bias. In line with Eisinga et al. (2013), it is recognised that using scales of such a limited number of items is not an ideal approach. However, it is acceptable in studies researching hard-to-reach populations with limited resources, such as the present one.

Additionally, as with any quantitative study around a sensitive topic such as online therapy, collecting qualitative data could have enhanced interpretation of the numerical data. Future work could be employed to explore qualitatively the relationships tested in the current work. For instance, one of the hypotheses made was that higher levels of awareness of online disinhibition theory would be associated with an increased diversity of modes of

communication. It is possible that one might be sufficiently aware of online disinhibition theory and its applications but purposely (and for well-justified in their perception reasons) has chosen not to adopt associated techniques. A qualitative exploration of the motives and decision-making process as to why clinicians might choose to employ or decide against certain modes of communication could lead to a more in-depth understanding of the subject matter and the decision-making processes in terms of the uptake of online therapy by both practitioners and clients alike.

Following from this point, a final limitation of this project is that it cannot claim one-way relationships between cause and effect among the investigated factors. While it was found that awareness and motivation predicted uses and applications, due to its correlational design, the current thesis remains limited in capturing potential inverse effects between OOTUA and AKCOT. As discussed earlier in this chapter, especially concerning the motivational factors, accumulation of experience is, at least, theoretically associated with an increase in knowledge and awareness of key consideration in online therapy. It can also be asserted that increased use and applications of diverse modes of communication could significantly predict awareness of associated theories and considerations. These indications are worthy of further investigation in future works that may intend to follow up on the current project's findings. This, however, is something that was outside the scope of this project and provides a limitation in the way the current results could be interpreted and understood.

### **5.5. Future recommendations**

In addition to the above noted future directions to assess the limitations of the current research, there are several other interesting aspects of the work that lend themselves to future exploration. The current thesis has found that 30% of the variance of online therapy applications was explained by the clinicians' awareness of associated considerations. Also,

10-20% was explained primarily by clinicians' perceived competence in forming an online therapeutic alliance. While these are useful findings, there are still many factors that need to be explored in the pursuit of a complete understanding of the issue of online therapy applications and client engagement from clinician's perspective. For instance, Attrill (2012) demonstrated that attitudes towards online relationships could have an impact on the degree to which individuals self-disclose online. It would be worth exploring this factor in the therapeutic context, both from the therapist's and the client's point of view. Joiner et al. (2002; 2005; 2012) also found that Internet identification and internet anxiety tend to account for close to 40% of the variance in internet use. It would be interesting for future online therapy research to consider these indications as to online therapy practical applications and in combination with the current thesis' findings. In addition, the omitted in the current thesis factor of *perceived ease of use* (e.g. Davis 1989; Lazuras & Dokou, 2016) of online intervention would be useful to be explored in future research, in conjunction to the current thesis findings or to the classic TPB model.

Another useful area for future focus would be to assess awareness and motivation as predictors to online therapy applications over time. There is an emerging theoretical indication point to the possibility that these predictors might interact with one another over time (e.g. Feijt et al., 2018). The current thesis proposed that time brings added perceived competence, which also strengthens the influence of intrinsic motivation. It would be useful if future research explores in more depth these premises using both quantitative and qualitative models of exploration. From an implementation science (e.g. Nilsen, 2015) standpoint, evidence of this type could play a critical role in supporting meaningful changes as to the minimum requirements for counselling and online therapy training.

Additionally, it is highlighted that the latest systematic reviews looking at applications of online therapies call for more empirical evidence in relation to real-life

contexts (e.g. Richards et al., 2018; Vis et al., 2018). The present thesis adhered to this call by adopting a quantitative design focusing on the practical applications of online therapy and the issue of client dropouts (from a clinician's perspective). On this basis, it is suggested that future research explores specialist online therapy training engagement as a predictor against online therapy applications, rather than as an outcome factor (as explored in the current research project). Furthermore, it is recommended that future research considers in more depth cyberpsychology literature and its potential applications in the field of online therapy using further experimental, empirical methods of enquiry. For example, future research could further investigate the adoption of avatar-based or virtual reality interventions and clinicians' intentions and perceived competence utilising such technologies, in routine practice. Such exploration could provide additional useful insights, as to future directions in the domains of training and educational policy in online therapy.

#### **5.6. Researcher's reflexivity note**

The empirical method of research is predominantly associated with the deductive logic, which is used to explore its objects of enquiry according to the logical positivist's tradition (Tolman, 1991). Several philosophers and writers have indicated that principles of natural observations are not inherently transferable to the exploration of psychological phenomena which are implicit and non-directly observable (Frie, 2004; Loewenthal & Snell, 2003). Counselling psychology adopts a critical standpoint towards the grand narratives and 'a priory' dogmatic truths, recognising instead, the importance of meaning and discourse within the process of therapy and research. In this respect, any truth or reality can be challenged socio-linguistically, considering the dominant and culturally specific discourses that govern any given context (Barker, Pistrang, & Elliot, 1994; Rennie, 1994). As such, epistemological reflexivity is recognised as a necessary and valid agent of knowledge that often questions implicit assumptions within the predominant positivistic research paradigm

(Chia, 2014). With the present being a counselling psychology thesis project, it is deemed important that a section of epistemological reflexivity is included as part of the current discussion chapter. This section aims to provide an added insight as to the epistemological and ontological views of the researcher, and it considers how those have influenced the development of the current project. To convey the necessary immediacy and an ability to take ownership of one's views, this section uses a combination of first and third-person writing.

A key question that needs to be raised is why as a counselling psychologist, who takes a predominantly critical view to the observational and empirical method. I have decided on the current methodological paradigm to underpin my thesis. It appears to me that despite its pitfalls within psychology, the empirical method holds a position of influence in the domain of psychology (Nelson, 2015; Vis et al., 2018). In terms of psychological therapy, empirical evidence seems to be the primary source underpinning official guidelines of practice and policy change. With the academic and applied landscape being influenced with empirical evidence, I thought that a quantitative design with empirical basis would be more likely to facilitate a potential change at the professional regulatory and training level as originally intended by the current thesis.

In designing this project, my post-modernist ontological views on the nature of knowledge were in conflict with the chosen paradigm of enquiry. Traditionally, positivism views knowledge creation as a process that evolves over time and is strictly relied on rebutting pre-existing knowledge, in favour of the most recent and current evidence in a given area. I would agree with Teo (2010), who suggests that this view on knowledge creation is problematic as it logically implies that what is presently known is also going to be proven insufficient, as new evidence will emerge in the future to disprove it. In contrast, as a post-modernist and scientist-practitioner, I accept that different and opposing views can be equally valid. This contention is based on the fundamental premise that there is no universal

truth to be discovered. On this basis, I would view knowledge creation as a dialectical process which can integrate or exclude both new and old knowledge over the passage of time; depending on the needs and ongoing evidence within each professional and academic community. This implies a fluid process which allows me (as a scientist-practitioner) to embrace uncertainty accounting for present and past research evidence simultaneously allowing different perspectives to co-exist across time.

These views of mine produced a tension which I think is visible in the approach I adopted designing my research project. Overcoming and dealing with the limitations of my own decisions as the current thesis project progressed, enabled me to embark on a learning journey and recognise my areas of growth as a researcher. Most importantly I developed an in-depth understanding of the value of rigorous empirical research in the area of applied psychology, which led me to arrive at my own philosophy, as to the role of empirical research within counselling psychology. Indeed, if I was to design this project again, I would make different decisions that would reflect my today's insight and methodological knowledge.

Another issue worth raising relates to my views on the nature of cyberspace and its role within psychological therapy. This has also been a source of tension against my core humanistic views on human nature. I can see the usefulness of cyberspace in terms of psychological therapy, but I cannot help wondering how the increasing popularity of the Internet use, and the conveniences it affords, might infringe with the core neurobiological, developmental and relational processes which are essential elements in the therapeutic process. This might seem an outdated debate, but in my opinion, it is as relevant as ever. As Suler (2016) states in his latest book, humans are going 'electric', within a society that is increasingly drawn to interpersonal convenience and cost-effectiveness.

Inevitably, life changes and old ways of looking at and experiencing human interactions do change, becoming digitalised and often quite impersonal (Turkle, 2017). As a society we have assimilated several pieces of new technology throughout the last century and are now in a position to reflect on how some of those (early pieces of technology such as television, stationary and mobile phone devices) have evolved through the passage of many years. We might be at a position to start learning some lessons as to the eagerness by which we tend to adopt new technologies (as a society). As such, we could ensure that we are not being blinded by the enthusiasm or the conveniences that new technologies and the Internet afford. We need to carefully think through how those would change human nature and communication in the long-run (Dahlberg, 2009).

I am sceptical as to how our progressive reliance on distant communication and digitalised relationships could contribute to human development and emotional stability. I am also quite concerned as to the way digital technologies have changed the rules of basic human communication for a whole generation (e.g. millennials); and what the long-term impact of this change might be at a lifespan developmental level. While I strongly believe that the cyberspace can have, indeed, a valuable impact changing the landscape of psychological therapies; I would not hesitate to accept that life is inextricably dependent on pure interpersonal and FtF human interaction. Links between interpersonal neurobiology and psychological therapies are becoming stronger and clearer supporting this belief (e.g. Siegel, 2012). More than ever before, it is scientifically accepted that the human brain and its capacities of neuroplasticity develop in the context of human-based compassionate and loving FtF relationships (see also Gilbert, 2010).

As such, although I am an advocate of the use of technology in therapy, I am a careful and a sceptical one at the same time. It is on this basis, perhaps that I have chosen to focus on exploring some of the drivers that underpin the applications of online therapy,

looking primarily into its ethical, evidence-based and security facets. Post-humanism (e.g. Nayar, 2018) is a recently emerged philosophical school which considers the ethics and ontological implications of a digitalised view of human nature. It calls for a debate to take place, seeking to think carefully as to how we expect technological and other advancements to impact the way life is shaped on earth over the next few decades. I subscribe to this call, and much like Mallen et al. (2005), I re-issue an invite to all (counselling) psychologists that share similar concerns to join with me in this debate.



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