

Cucchi, A. (2016). The embodied mind: A journey through the “soma” to reach the “psyche”.
(Unpublished Doctoral thesis, City, University of London)



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The embodied mind:

A journey through the `soma_ to reach the `psyche_

Angie Cucchi

Portfolio submitted in fulfilment of DPsych Counselling Psychology,
Department of Psychology, City University, London

November 2016

THE FOLLOWING PARTS OF THIS THESIS HAVE BEEN REDACTED FOR COPYRIGHT REASONS:

- pp. 20-38: **Journal article.** Differences in mentalising ability in presenting with eating disorders with and without concurrent self-harm: A comparative study.
- pp. 187-192: **Questionnaires.**

THE FOLLOWING PART OF THIS THESIS HAS BEEN REDACTED FOR DATA PROTECTION/CONFIDENTIALITY REASONS

- pp. 256-272: **Section three.** Professional practice: A journey through the 'Rational Mind' and the 'Paradoxical Logic of the Unconscious': An integrative study.

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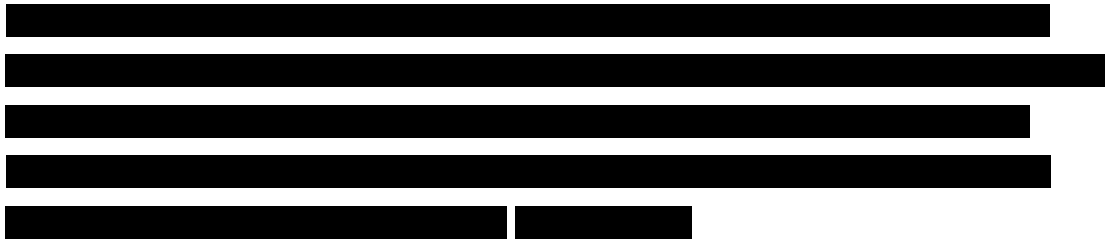
To Dr. Jacqui Farrants, whose motivation and encouragement made a significant difference to my most recent professional and personal journey. She provided a `safe base_ and believe in me. Dr. Farrants continued to provide me with unwavering support, warmth, direction and understanding. I doubt that I will ever be able to convey my appreciation fully, but I owe her my most sincere gratitude.

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Lastly, a heartfelt thank you to Prof. Anthony Bateman for keeping me in mind. I have learnt much from and because of him.

Dedicated to all those people
who struggle to use their words to communicate emotions
and use, instead, their body.



Declaration

I grant powers of discretion to the University Librarian to allow the thesis to be copied in whole or in part without further reference to the author. This permission covers only single copies made for study purposes, subject to normal conditions of acknowledgement.

Abstract

Background: Recent studies have confirmed a significant comorbidity between eating disorders and self-harm; they linked the presence of self-harm to a more severe and treatment-resistant eating disorder symptomatology. Difficulties with impulse-control were suggested to mediate this association. The present study explored another variable believed to be involved: mentalising. **Method:** A cross-sectional, questionnaire-based, between-groups design was employed and a measure of mentalising was compared in individuals presenting with eating disorders and in individuals presenting with eating disorders and concurrent self-harm. Both groups were compared with a control group. **Results:** Findings suggested that individuals with concurrent presentations reported less mentalising ability compared to individuals without concurrent difficulties. In addition, both groups significantly differed from the control group. **Conclusions:** Results are discussed in relation to clinical implications.

Outline of the professional relationship between the candidate and Prof. Peter Fonagy

In February 2010, the candidate contacted Prof. Peter Fonagy seeking permission to have access to the Reflective Function Questionnaire (RFQ), a newly developed self-report measure of mentalising. The candidate explained that access was requested in the hope to use the scale to investigate a phenomenon of the current study as part of her Doctoral thesis. Prof. Fonagy referred the candidate to Dr. Alesia Perkins who, together with Prof. Fonagy and other professionals worldwide, were working on the validation of the RFQ. Following the trainee's summary of her intended project, it was agreed that the candidate could employ the RFQ for her Doctoral thesis. It was also agreed that the candidate's final raw data would be shared with Prof. Fonagy in order to aid the validation of the scale with the sample client-group. Hence, initial work was carried out in parallel to the validation of the measure. As a result of these arrangements, the candidate's research project, together with that of other trainees who also requested to use the RFQ for their own Doctoral thesis, was included in Prof. Fonagy/Dr. Perkins' NHS ethical application form. Nevertheless, the studies are independent and the current project is entirely the trainee's work. The only point of contact is that the trainee researcher will share the results collected. Hence, no conflict of interest is present.

At the time of initial contact with the above mentioned professionals, the validation of the RFQ was ongoing. The candidate employed the version available at the time, the RFQ-54, in order to explore mentalising differences amongst individuals presenting with eating disorders with and without self-harm. However, in 2015, the RFQ scale was re-defined and the candidate was able to re-analyse the data according to the new subscales. The new version of the RFQ has been submitted for publication in PLOS ONE (personal communication, 18 October 2015). As a result of this journey, the research will be divided into three parts: Part one will investigate differences in mentalising ability in the targeted population using the original version of the RFQ available at the beginning of this project (RFQ-54). Part two will retrospectively apply the newer version of the RFQ to the same dataset in order to compare mentalising differences according to the new scale. In this regard, and in order to differentiate the new scale from the RFQ-54, the former will be referred to as RFQc/u for the sake of this empirical project. Part three will explore the relationship between the RFQc/u and related measures. Due to the ongoing validation of the RFQ scale, indirect aims of the two sections will also be to explore the factor structure of the RFQ-54 and of the RFQc/u, to test whether the RFQc/u scale will be able to predict SH and to correlate the measure to related concepts in order to test concurrent validity.

Preface

Preface to Portfolio of Work

This portfolio comprises of three parts: 1) a journal article; 2) an empirical research project and 3) an extended case study. Each section has been completed as part of my training for the Doctorate in Counselling Psychology at City University and as part of my journey towards becoming a qualified Psychologist. Indeed, the sections are separate and they exemplify different core competencies of my knowledge and skills as both a scientist and a practitioner. At the same time, it can be argued that all of the parts of this portfolio are linked by a common theme, namely that of the embodiment of mental distress, which can translate into direct or indirect self-harm. These topics have been my interest since my MSc years. The order in which the sections are arranged has been decided with a clear rationale. It seemed helpful to introduce the reader to the argument of the portfolio and the research-project in a concise way. Hence, the first part of the manuscript is a journal article that has won the British Psychological Society (BPS) Division of Counselling Psychology (DCoP) Research Prize 2015 and has been published in the *Counselling Psychology Review* (Cucchi, 2016). The paper summarises the thesis's main findings and the possible implications for psychotherapy in a succinct way, therefore familiarising the reader with some of the core concepts and ideas that will be expanded upon later. Following this section, it seemed logical to build upon the concepts discussed in the journal article through the presentation of the empirical project. Lastly, it seemed appropriate to show how embodied emotions can translate into diverse clinical presentations and how people who use their body as a vehicle of communication for their own distress can struggle to engage in traditional therapeutic approaches. As the reader proceeds through this portfolio, they might wonder about my epistemological stance as I recommend a post-modernist, systemic standpoint in some of my writing, yet employ a quantitative analysis which might suggest a positivist position. Following extensive consideration on this matter, which has matured during the course of my academic and professional journey, I have come to regard myself as a pragmatist. It has been argued that being a pragmatist requires neither an ontology nor an epistemology because what counts as true is not the actual correspondence to the 'real' world, but rather whether a stance is functional and progressive (Schuh & Barad, n.d.). Indeed, during my personal and professional journey, I have experienced and witnessed the dangers of becoming too overly reliant on a 'lens' to interpret the world. The cognitive bias of the 'Mental Filter', used to describe the gloomy impact of depression on life, can be a valid metaphor for most things in life. It can be argued that if human beings become too inflexible in their stances, or if standpoints are decided a priori, things can be read through that lens and biases can develop. Rogers (as cited in Kasket, 2012) himself warned professionals about laying aside

preconceptions and clear cut-constructs as he asserted that there was no special virtue in any one procedure. On the contrary, the clinician argued that the method of testing should be appropriate to the hypotheses.

In this regard, I made a commitment towards avoiding trying to fit things, ideas and people into pre-conceived boxes. I made a commitment towards curiosity, where this is defined as 'a conscious strategy of actively avoiding the acceptance of one position as more correct than another' (Cecchin, 1987). I adopted a focus on functionality instead. Indeed, this seems congruent with a Counselling Psychology perspective as described by Milton (2010). Milton reminds the reader that the ethical integrity of the discipline can only benefit from holding different emphases and different epistemological perspectives together. Undeniably, theoretical and epistemological variety is inherent to human nature and it can be argued that, since total knowledge is impossible, many partial perspectives are ultimately better than only one (Milton, 2010). A similar position was advocated by the 2012 joint Research Lead of the Division of Counselling Psychology, Elaine Kasket. The clinician/researcher argued that,

you may consider yourself a social constructionist, but that does not preclude you pursuing a quantitative methodology for your Doctoral thesis_ because ultimately 'being a Counselling Psychologist researcher means being open to exploring all the paradoxes, divergences and different perspectives and being curious about the multitude of researches approaches available. (Kasket, 2012)

Initial investigations suggested that the Journal of Eating Disorders might have been a good journal for the submission of the article. This decision was made on the basis of recent reviews published in the same journal; these attempted to shed light on the current status of self-injury in eating disorders (ED; Kostro et al., 2014) and on the current evidence for the treatment of ED in young people (Bailey et al., 2014). Kostro et al. (2014) substantiated the greater severity of ED psychopathology in individuals presenting with self-harm (SH) and urged clinicians to carefully evaluate these clients and refer them to appropriate treatment. However, Bailey et al. (2014) the latter argued that the evidence-base for ED is not well established and that gaps remain in terms of effectiveness of interventions. Bailey et al. (2014) further recommended that interventions should be preventative, and called for further research. In addition, a further paper published in the same journal called for the development of meta-cognitive interventions targeted towards thinking about internal states in women presenting with ED (Vann, Strodl & Anderson, 2013). Lastly, a critical review of the literature explored the relationship between alexithymia (difficulty identifying and expressing emotional states) and ED. As the reader will learn in the course of this portfolio, alexithymia is a crucial concept for mentalising and an intrinsic feature of the empirical project. Hence, for all the points discussed above, it was felt that the Journal of Eating Disorders, would be a suitable platform for the proposed submission of the article.

However, since the initial submission of this thesis, the journal paper in Section A has won the Division of Counselling Psychology BPS Research Prize 2015 and it has been published in the *Counselling Psychology Review* (Cucchi, 2016).

The paper in Section A introduces the reader to the empirical project by summarising some of its findings in relation to differences in mentalising ability in individuals presenting with ED, individuals presenting with ED and concurrent SH, and a control group. The introduction touches upon the literature that supports the existence of a specific link between ED and SH and upon some of the existing current explanations for this comorbidity. In this context, I present an alternative hypothesis recently emerged in the international panorama, namely the suggestion that mentalising could be responsible for this association. Following a brief description of mentalising and its conceptual roots, the paper focuses on 'pre-mentalistic states of mind', the ways of functioning that precede the acquisition of the capacity to mentalise. Specific references to how those states of mind might translate in ED and SH psychopathologies and the implications that these might have on individuals' capacity to engage in traditional psychotherapy are discussed. Lastly, following the presentation of the results, the implications are discussed in relation to theoretical constructs and clinical practice, highlighting the need for targeted interventions that take into consideration this client group's specific difficulties.

The second section (section B) is the empirical research. As previously mentioned, the empirical research is an extension of the concepts discussed in the journal article. Together with reporting data on the difference in mentalising ability in the three groups mentioned above, this project also addresses in advance some of the potential limitations of the choice of the scale employed to assess mentalising. More specifically, as work on the validation of this measure in different populations is ongoing, I made a pragmatic decision to employ the scale, but also to investigate the relationship between reflective function and other related concepts. This was done in an attempt to verify the construct validity of mentalising. In terms of literature review, this section places more emphasis on the natural process of development of mentalising and on the core conditions for its emergence. Instead, the discussion expands upon the theoretical and clinical implications mentioned in the previous section to include a specific outlook on current approaches to the management of self-injurious behaviour in the ED population. In this regard, the implications of the current findings upon available treatments are emphasised. A broader, systemic stance is adopted to discuss some of the findings and to encourage critical awareness of the impact of social and contextual factors upon the development, and also upon the treatment of eating and SH psychopathology. In this regard, I suggest the need for clinicians to adopt a trans-diagnostic approach that takes into consideration the complexity of human beings. In terms of conceptual framework employed for this study and my viewpoint on

epistemology, the empirical project will further expand and elucidate upon that discussed at the beginning of this preface.

The last section of this portfolio (section C) includes an extended case study which I hope will symbolise the scientist-practitioner paradigm and attempt to reduce the theory-practice gap through the integration of psychological theory within practice. The case was selected from many not only for its specific features, which arguably exemplify some of the core concepts discussed throughout the portfolio, but also because, to-date, it represented one of the most challenging cases that I have encountered thus far. The work was carried out at a specialist Clinical Health placement with a client who presented with severe chronic pain and other physical issues which could be partly viewed as embodiment of emotions and indirect SH. In line with the British Psychological Society (BPS) guidelines (2006), the case illustrates the clinician's commitment to 'recognise the social contexts and to work in ways that empower rather than control'. It further depicts my commitment towards the application of a working style that 'fits' the individual (Skovholt & Ronnestad, 1992), rather than the clinician, and highlights some of the struggles professionals face when negotiating treatment protocols and clients' needs within the constraints of services, the context and the economic climate in which they are embedded. This last point also arguably responds to BPS recommendations that require counselling psychologists to consider 'the context in which they work and the impact that such a context is likely to have on the client's therapeutic experience' (BPS, 2006). Ultimately, the case study illustrates some of the difficulties experienced in the work and how those were managed through supervision and consultation with different professionals. This is arguably in accordance to BPS guidelines that urge one to recognise 'all contexts that might affect a client's experience and incorporate it into the planned intervention for discharge' (2006). A final point worth mentioning is in respect to the formulations used to conceptualise the client's difficulties in the case study. Without doubt, these conceptualisations are speculative and indeed I do not try to formulate 'objective truths' about the origins and/or the maintenance of difficulties. Instead, I aim to develop 'working hypotheses' (Dallos & Draper, 2005) which can be more or less helpful at any given moment in time. Ultimately, I view the client as the 'expert' of their own life.

It is hoped that these three pieces of work combined together will demonstrate my developing skills within the 'scientific demand for rigorous empirical enquiry with a firm base grounded in the primacy of the psychotherapeutic relationship' (BPS, 2006). Ultimately, it is hoped that this portfolio will convey my passion for learning which I sincerely hope to continue to build upon during my professional career.

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Section A: Journal article

Differences in Mentalising Ability in Individuals Presenting with Eating Disorders with and without Concurrent Self-Harm: A Comparative Study.

Abstract

Background: Recent studies have confirmed a significant comorbidity between eating disorders and self-harm. They linked the presence of self-harm to a more severe and treatment-resistant eating disorder symptomatology. Difficulties with impulse-control were suggested to mediate this association. Instead, the present study explored another variable believed to be involved: mentalising. Method: A cross-sectional, questionnaire-based, between-groups design was employed and a measure of mentalising was compared in individuals presenting with eating disorders, and in individuals presenting with eating disorders and concurrent self-harm. Both groups were compared with a control group. Results: Findings suggested that individuals with concurrent presentations reported less mentalising ability compared to individuals without concurrent difficulties. In addition, both groups significantly differed from the control group. Conclusions: Results are discussed in relation to clinical implications.

B. Section two

Empirical research

Differences in mentalising Ability in Individuals Presenting with Eating Disorders with and without concurrent Self-Harm: a Comparative Study.

Abstract

Background: Recent advances in the literature (Cucchi et al., 2016) have confirmed the significant comorbidity between eating disorders (ED) and self-harm (SH). Studies have also confirmed that SH is correlated to more severe (Anderson et al., 2002; Claes et al., 2003) and treatment-resistant ED symptomatology (Nagata, Kawarada, Kiirike, & Iketani, 2000). However, despite these findings being now widely recognised, the association between the two presentations is still unclear (Levitt, Sansone, & Cohn, 2004). Some researchers have suggested that difficulties with impulse-control mediated this association.

Aims: The present study explored another variable believed to be involved: mentalising (Skarderud, 2007; Perkins, 2009).

Method/design: A cross-sectional, quasi experimental, questionnaire-based, between-groups design was employed and a measure of mentalising was compared in individuals presenting with ED only (ED_noSH) and in individuals presenting with ED and concurrent SH (ED_SH). Both groups were compared with a control group. The dependent variable (DV) was the Reflective Function Questionnaire (RFQ-54), a collection of items that were in development and the independent variable (IV) was group-type. Three one-way between-subjects MANOVAs were conducted to compare differences in mentalising ability across the three groups, across the two ED groups and the control, and across the ED group with/without SH. Following recent developments with the validation of the RFQ (Fonagy et al., 2016), the same dataset was retrospectively re-analysed using the newer version of the RFQ.

Results: Individuals with concurrent self-harm reported more mentalising ability impairment than individuals without concurrent SH. In addition, both groups differed significantly from the control group.

Conclusions: Results are discussed in relation to clinical implications of current psychological interventions and recommendations for future studies.

The Structure of the Thesis

In order to explore mentalising differences in individuals who present with ED with/without SH, the researcher has divided this thesis into four different sections. The first part encompasses the literature on mentalising, including a definition of the core concepts, an overview of mentalising in history, the proposed origins of the capacity to mentalise and a discussion on related concepts and pre-mentalistic states of mind. All of this information was eventually evaluated in a critical appraisal (p. 84). The literature search was conducted using Psych Info, Medline and Psych Articles databases and City University library and catalogue. Search words included variations of several subject terms, which were eventually combined amongst them. These words were: mentalisation, reflective function, eating disorders/difficulties, Anorexia/Bulimia Nervosa, self-harm, deliberate self-harm, self-injurious behaviour, self-mutilating behaviour, self-cutting/cutting, and parasuicide. Results were subsequently combined between them. Articles pertinent to the scope of the study were thoroughly inspected, and forward and backward chaining was conducted.

Unpublished doctoral theses were looked at and found to be extremely pertinent to the current project. However, given the heavy reliance of this project on unpublished material, the relevant Doctoral dissertations will be included as PDF files for the examiners' information.

The second part of this thesis includes the Method section. This encompasses information on the design and the procedures of the study, information on the questionnaires and information on the statistical analysis employed for this study. Ethical considerations are also discussed in this section. The third part includes the result section, outlines the main findings.

The last part of this thesis comprises the discussion: findings are elaborated upon in terms of theoretical and practical implications. Current treatment approaches to the management of ED and SH are reviewed, highlighting the implications of the present results for psychotherapy and for the therapist's stance. Finally, strengths and limitations of this empirical project are considered, with suggestions presented for possible future research.

Defining the Core Concept

A crowded and hectic supermarket, where hundreds of people rush around in a sort of methodical chaos. Suddenly, the fairly taciturn atmosphere of the shop is broken by the loud and piercing screams of a toddler who rolls herself on the floor, kicking. The child's mother's curious and inquisitive look sets upon her daughter with loving and genuine interest and affection. Mother then starts what appears more like a reflection of an internal dialogue, rather than a set of questions that require answers. 'What's the matter, darling? Are you tired? Are you bored? I am sorry mummy did not buy you sweets... you must be feeling frustrated too'. While she lovingly says those words, mother picks up her daughter from the floor and gives her a cuddle, holding the little girl's head to her shoulder and swinging gently, before putting her back into the trolley's seat. Mother then adds: 'let's put your cardigan on, just in case you are cold'. Such brief, primarily one-sided interaction seems to soothe the child as she happily settles into the seat with a contented smile.

This scenario exemplifies the everyday, often implicit and unconscious use of the core concept that the current study seeks to investigate: the concept of mentalising. Adopting a mentalising stance can be described as endorsing a reflective attitude, being aware of mental states and being curious and inquisitive about how different mental states might be related to behaviour. This is both towards others, as illustrated in the former example, as well as towards oneself. More formally, mentalisation has been defined as 'the mental process by which an individual implicitly and explicitly interprets the actions of himself and others as meaningful on the basis of intentional mental states' (Bateman & Fonagy, 2004, p. 21).

For example, in the above anecdote, the mother promptly and attentively considers several reasons that might be behind her daughter's untimely tantrum. Mother appears to attribute feelings, emotions, wishes and sensations to her little girl and she openly speculates upon the reasons that might be driving her daughter's behaviour – such as being tired, bored, frustrated and/or cold. It appears that mother recognises her daughter as an intentional being whose internal world is not observable, yet is externalised and expressed in behavioural terms. It further seems that mother attempts to assign a status to her little girl's intentional act in order to deal with the behaviour. As eloquently described by Allen and Fonagy (2007), it appears that the mother keeps her daughter's 'mind in mind', whilst retaining that tentative and exploratory position that is a central tenant of a good mentalising stance.

Whereas mentalising might seem like a basic concept and something that we do on a daily basis, it can also become very demanding and difficult, especially in the face of stress and sickness. In everyday life, we mentalise when we attribute intentions to each other's behaviours, either explicitly as above, or implicitly. Conversely, when we fail to adopt a mentalising stance,

we are governed by outer forces, impulses, coincidences and/or simple stimulus-responses (Karterud & Bateman, 2011). For example, the scenario above could have taken a different turn had the mother been feeling excessively embarrassed and overly concerned about being judged by passers-bys for her daughter's tantrum, or had the mother been feeling distressed herself, or sick, or intoxicated. Weighed down by the intensity of her own emotions, the mother might have struggled to respond effectively to the baby's distress and she might have, instead, reacted to the tantrum on the basis of her own emotions.

In this regard, Allen and Fonagy (2007) report the scenario of a tired, sleepy mother who is awoken in the middle of the night by her crying six months old baby. The mother's initial reaction might be of irritation, anger and exasperation for having to attend to the baby ahead of a long day's work. However, despite this first, instinctual response, the mother might also be able to keep her baby's physical and emotional needs in mind and curiously wonder about and attend to the infant's distress. What might have started with a failure of mentalising as a result of the mother's vulnerable and tired state, quickly turned into a situation in which the caregiver was able to retrieve her capacity to mentalise. The authors then contrast this example with the case of a mother who might be sleep deprived, alone and/or stressed and might not be able to separate the child's distress from her own, resulting in her interpreting the child's crying exclusively as hostile.

In the latter instances of both scenarios, the mother might not even be able to consider any alternative explanation for her baby's distress apart from her own feelings of discomfort and irritation. The mother's capacity to keep her baby's motives and reasons in mind and to use those to consider a different perspective from her own has shut down in the face of stress. The mother's capacity to mentalise has, albeit perhaps temporarily, failed and a pre-mentalistic state of mind known as the 'psychic equivalence mode' has emerged. When functioning in the 'Psychic Equivalence mode', individuals' internal worlds is projected onto external reality and no other possibility from the one experienced seems feasible. Hence, the mother's own negative emotions become the dominating force driving her interpretation of the event.

Given that mental states are opaque and we can never truly tell what someone else is thinking or feeling their communicated interpretation of their own feelings, 'an important indicator of high quality mentalisation is the awareness that we do not and cannot know absolutely what's in someone else's mind' (Allen & Fonagy, 2007, p. 54). This was illustrated in the first example discussed, when the mother adopted a curious stance and mentalised several different hypotheses to make sense of her daughter's tantrum. Mentalising does not concern itself with 'the truth' of a particular event, feeling, wish or sensation, but rather with the mental activity of imagining what oneself/others might be thinking or feeling and what might be

driving a specific behaviour. In the latter example, for instance, the lack of a mentalising stance relates exclusively to the mental process that the mother engages with to come to the conclusion that her baby's crying was a hostile act. Mentalising regards the content as secondary to the process.

Since mentalising appears crucial for inter-personal, as well as intra-psychic awareness and clarity, it can be argued it is an essential component of any successful personal interaction, as well as any therapeutic encounter. For example, in a clinical role-play uploaded on YouTube called Mentalization Based Treatment by Prof. Bateman (2012), Professor Bateman helps Alice explore and reflect on her firm and overwhelming fears about him, as well as her boyfriend 'firing her', fears that had precipitated an impulsive suicide attempt few weeks before. Professor Bateman skilfully, yet emphatically, slows the emotions' fast and overwhelming pace. At the same time, he proficiently, yet gently and compassionately, introduces different perspectives and possibilities which conclude with the pretend client considering 'grabbing the cat and holding it, thinking in the long run, slowing things down' instead of self-harming.

Many different clinical examples of mentalising failures have been reported and thoroughly discussed in the literature (Allen & Fonagy, 2007; Bateman & Fonagy, 2007; Skarderud, 2007a, 2007b; 2009). Despite the individual differences, they all suggest that individuals with different levels of mentalising capacity may differ in their ability to engage in psychotherapy (Katznelson, 2014) and that a lack of a mentalising stance (i.e., a propensity and willingness to engage in mentalising) might hinder the level of engagement in therapy (Bateman & Fonagy, 2004). The lack of a mentalising stance that cultivates curiosity, inquisitiveness and imaginativeness towards mental states would inhibit willingness to explore and reflect upon feelings in oneself and others. The latter being an attitude central to the therapeutic process. In addition, a lack of a mentalising stance that fails to recognise that mental states are opaque, that emotional and behavioural responses often encompass conflicting elements and that emotional/behavioural reactions are multifactorial will hamper an individual's capacity to consider different perspectives.

For example, in the above-mentioned role play, had the therapist not been successful in fostering a mentalising attitude in the client, other possibilities apart from 'being fired, rejected and being better off dead' would have not been feasible to the client. For this reason, it appears that a mentalising stance is the pillar of any therapeutic dialogue, as well as daily inter-personal interactions. Although arguable that most mental disorders involve some sort of difficulties with mentalising (Bateman & Fonagy, 2006), it has more recently been suggested that impaired mentalising represents a core feature and, hence, a core obstacle to treatment in individuals who

present with ED and/or SH (Bateman & Fonagy, 2006; Skarderud, 2007). Indeed, pre-mentalistic states of mind, characterised by inner states being presented through the body, by a tendency to understand and conceive of behaviour and change primarily in physical terms and/or by the tendency to either experience inner life as if too real or too disconnected from outer reality have consistently been described in individuals who present with ED (Skarderud, 2007) and in individuals who engage in SH (Bateman & Fonagy, 2006).

Defining the Secondary Concepts

The second half of the 20th century has witnessed dramatic economic, social and political transformations of all times. Paradoxically, as material wealth in the West increases and individuals' average incomes have nearly doubled compared to fifty years ago, the number of people referred to psychiatric services has also dramatically escalated. According to a recent report published by the mental health charity Mind, six times as many people are now being referred to mental health services compared to the 1940s (MIND, 1998). These figures suggest that, despite societies now being wealthier, they are not necessarily more blissful, a point that seem to echo and support Lord Layard's statement that 'we all want more money, but as societies become richer, they do not become happier' (Layard, 2005 p. 3).

In particular, it appears that in conjunction with an increase in wealth, which consequently led to an increase in the amount and variety of food readily available, society has also witnessed an upsurge in the number and severity of maladaptive eating patterns and eating-related behavioural problems (Mazzeo, Espelage, Sherman & Thompson, 2003; Micali, Hagberg, Petersen & Treasure, 2013). These range from simple dieting to the extreme cases of ED. Together with this and closely connected with a poor body image (Graff & Mallin, 1967), society has also recently seen an increase in the number of people who engage in direct SH (Carr et al., 2016; Kapur & Gask, 2009). However, despite this apparent recent rise, it can be argued that eating-behavioural deviations and SH have always been embedded in social structures and often accepted, as well as encouraged by the community.

For example, it is extensively documented in the literature how the 'father' of ancient medicine, Hippocrates (460 BC-370 BC) endorsed the use of herbal potions to cause vomiting and/or anal purging (Corpus Hippocraticum) and how such remedies were commonly employed until mid 1800s in an attempt to clean the body from diseases and ailments. Additionally, in his systematic review of Anorexia in history, Bell (1985) reports numerous mediaeval accounts of young women and religious-order followers starving themselves in an attempt to imitate Christ's sufferings. Bell also skilfully describes the Christian tradition of 'mortification of the flesh', which not only included starvation, but also self-flagellation and extreme self-deprivation in order to abstain or punish oneself of sins. Indeed, these socially accepted eating

disturbances and SH acts were not simply allowed by the Church, but encouraged and admired to the point that those who died out of starvation and self-injury in an attempt to control the flesh were venerated as holy martyrs.

Although purging was also widespread in ancient Rome, it had a different function. From using purging as a way to castigate or purify the body, ancient Romans had the habit of regularly inducing vomiting during banqueting in order to eat more (Seneca, as cited in Keel & Klump, 2003).

It could, then, be argued that the dramatic rise in the incidence of ED and SH in the last thirty years might be more a reflection of increased detection of the disorders after their formal discovery, rather than a true increase in incidence rates (Currin, Schmidt, Treasure & Jick, 2005). Nevertheless, after its formal detection, the term 'Eating Disorders' has been used to describe,

a persistent disturbance of eating or eating related behaviour that results in the altered consumption or absorption of food that significantly impairs physical health or psychosocial functioning, which is not secondary to any general medical disorder, or any other psychiatric disorder. (Fairburn & Walsh, 1995, p. 135)

Anorexia Nervosa (AN) was the first ED placed in the Diagnostic and Statistical Manual of Mental Disorders (DSM-I) in 1952 (APA, 1952) as a psycho-physiological reaction or a neurotic illness. It was only in the publication of the DSM-II in 1968 that AN was categorised under symptoms: feeding disturbances. Instead, it was not until the 1980 DSM-III that Bulimia Nervosa (BN) was classified as a separate diagnostic category in its own right. Prior to this, BN as a syndrome did not exist, but rather bulimic symptoms were described in conjunction to AN and other neurotic and psychotic difficulties (Parry Jones & Parry Jones, 1991).

Although it is recognised that the use of diagnostic labels is controversial and, some argue, stigmatising (Szasz, 1960), a pragmatic decision was made to utilise them for the purpose of the current study in order to allow rapid definitions of concepts and efficient, shorthand communication. This decision does not reflect the researcher's stance that acknowledges and sympathises with the limitations of diagnostic criteria. Furthermore, despite the current study not concerning itself with the separate categories of ED, for clarity of communication it seems appropriate to identify the core features of each. Since DSM diagnostic criteria were employed in the trusts where some participants were recruited for this particular study, DSM 5 (APA, 2013) definitions will be presented.

Although the two major diagnoses have historically been AN and BN, recent changes in DSM- 5 classification (APA, 2013) have seen the inclusion of Binge Eating Disorder (BED) as a separate category. In addition, there are other subgroups which encompass a large variety of very similar symptoms that do not accurately fit the above diagnoses: Other Specified Feeding or Eating Disorder (OSFED) and Unspecified Feeding or Eating Disorder (UFED).

Anorexia Nervosa is described as:

- ¿ Refusal to maintain body weight at or above a minimally normal weight for age and height (...)
- ¿ Intense fear of gaining weight, even though underweight
- ¿ Disturbance in the way in which one's body weight or shape is experienced (...).

Bulimia Nervosa is defined as:

- ¿ Recurrent episodes of binge eating ()
- ¿ Recurrent, inappropriate compensatory behaviour (purging, vomiting, laxative abuse) in order to prevent weight gain
- ¿ Self-evaluation unduly influenced by body shape and weight.

Binge Eating Disorder is classified as:

- ¿ Recurrent episodes of binge eating () eating when not feeling physically hungry, more rapidly than normal, until feeling uncomfortably full
- ¿ Feeling disgusted with oneself, depressed, or very guilty after overeating
- ¿ No inappropriate compensatory behaviour.

A few authors have recently suggested that ED should be classified as forms of SH, due to the indirect destructive effects of repeated purging and food refusal (Ahren-Moonga, Holmgren, Knorrning, & Klinteberg, 2008; Anderson, Carter, McIntosh, Joyce, & Bulik, 2002; van der Kolk et al., 1991, as cited in Favaro & Santonastaso, 2000). Nevertheless, despite acknowledging the above dilemma, for the purpose of this investigation, the researcher will endorse the distinction between direct and indirect SH (Favaro & Santonastaso, 2000). Hence, ED will not be considered as a form of SH per se.

The adopted definition of self-harm (SH) is of,

direct, socially unacceptable behaviour that causes minor to moderate physical injury, while the individual is in a psychologically distressed state but is not attempting suicide,

nor responding to a need for self-stimulation or a stereotyped behaviour (as found in mental retardation or autism. (Suyemoto, 1998, p. 532)

Examples of such behaviours are: cutting, burning, hitting oneself, hair-pulling. Currently SH is associated and listed as a symptom of many psychological disorders, amongst which borderline personality disorder (BPD), obsessive compulsive disorder (OCD), ED, post traumatic stress disorder (PTSD), dissociative identity disorder (DID), substance misuse and depression.

Putting it all together: Justification for the proposed research. Traditionally, ED have been associated with a number of psychological and medical difficulties (Claes, Vandereycken & Vertommen, 2003; DaCosta & Halmi, 1992; Edelstein & Yager, 1992; Fichter, Quadflieg, & Rief, 1994; Mehler & Andersen, 1999, Mitchell et al., 1997, as cited in Levitt, Sansone, & Cohn, 2004; Strobe & Katz, 1988). However, more recently, it has been reported that a considerable number of individuals who present with eating difficulties also engage in direct forms of SH. An association between ED and SH was first suggested in 1978 by Yaryura-Tobias and Neziroglu (1978) and was more recently confirmed in a review (Svirko & Hawton, 2007). Comorbidity prevalence figures in the literature vary considerably with some figures reaching peaks of 68% in Svirko & Hawton's review (2007) and even higher rates in single studies (Favaro & Santonastaso, 2008; Reas, Pedersen, Kerterud & Rø, 2015).

However, a recent meta-analysis reported a 28% comorbidity between ED and SH. This comorbidity varied from 22% to 33% respectively when AN and BN were evaluated separately (Cucchi et al., 2016). This means that one in three individuals who suffer from ED will also present with SH, emphasising the importance of targeting SH tendencies in the context of ED treatment (Peterson & Fischer, 2015). Shared demographic and phenomenological characteristics of ED and SH have prompted some researchers to suggest that this relationship goes beyond a purely statistical correlation (Favaro & Santonastaso, 2000) and recent studies have suggested similar underlying core features for both disorders (Farber, 2007; Lane, 2002; Skarderud, 2007).

In 1986, Lacey and Evans (1986) noted that a subgroup of individuals diagnosed with ED and engaging in concurrent SH put an enormous strain on the emergency services due to their impulsive traits that often precipitated crises. The authors argued that access to formal psychiatric care for this client group was often inappropriate and that the outcome of treatment was bleak. The researchers also suggested that impulse-control difficulties, coupled with a failure to consider risks and consequences, mediated the relationship between the inability to think about emotions and features of ED and SH, leaving the individual more vulnerable to a labile affect and a worse prognosis. Lacey and Evans argued that although this was a distinct

minority subgroup, it already represented a major treatment problem and emphasised the urgent and overdue need for specific treatment for this subgroup of individuals, highlighting the necessity to concentrate on all the symptoms (Lacey, 1993).

More literature supports this urgency (Reas et al., 2015) as it has been reported that although widely recognised, the comorbidity between ED and SH has not been sufficiently explored and, to-date, the association is unclear (Levitt et al., 2004). Nonetheless, the presence of SH in individuals with ED appears to be a poor prognostic factor (Favaro & Santonastaso, 2002) and seems to be correlated to more severe (Anderson et al., 2002; Claes et al., 2003; Claes et al., 2011; Fujimori et al., 2011; Islam et al., 2015; Peterson & Fisher, 2012; Muehlenkamp, Claes, Smits, Peat & Vandereycken, 2011) and treatment-resistant eating disorder symptomatology (Nagata, 2000; Olatunji, Cox, Ebesutani, & Wall, 2015).

Requests from the literature (Levitt et al., 2004; Peterson & Fischer, 2015), empirical evidence, the high drop-out rates found in both ED and SH, together with the elevated mortality risk found in individuals who present with ED, and medicinal options being largely ineffective (National Collaborating Centre for Mental Health, 2004, as cited in Russell, Schmidt, Doherty, Young & Tchanturia, 2009) make the devising of specific treatment for these client groups a priority. This is corroborated by empirical evidence that suggests that Cognitive Behavioural Therapy (CBT; Beck & Beck, 1995) is only effective in about 50% of the cases of BN (Levitt et al., 2004). It is further confirmed by NICE guidelines (2004), Russell et al. (2009) and Watson and Bulik (2013) who state that, in adults presenting with AN, no specific psychotherapy treatment stands out as being more effective than another. NICE guidelines further recommend research into newer psychological approaches.

Whereas some researchers proposed the existence of a 'multi-impulsive personality disorder' and argued that impulsivity failure mediates the relationship between ED and SH (Lacey & Evans, 1986), others suggested a 'repetitive self-mutilation syndrome' in which SH acts alternate with other behaviours such as ED (Favazza & Rosenthal, 1993). However, these hypotheses appear to fail to address the specificity of the link between ED and SH; instead, they group SH together with other so-called impulsive behaviours. In this regard, recent evidence suggests that substance misuse, also regarded by the above mentioned researchers as an impulsive behaviour, significantly predicted lower rather than a higher occurrence of SH (Cucchi et al., 2016). In addition, factor analyses suggested the existence of a 'compulsive', as well as of an 'impulsive' factor to SH (Favaro & Santonastaso, 1998, 2000, 2002), indicating that there might be more to the ED/SH relationship than impulsivity. In this regard, it has recently been suggested that another variable, namely mentalising, might play a role (Perkins, 2009; Skarderud, 2007a, 2007b, 2007c).

Fonagy (2005) proposed that the characteristic thinking pattern present in individuals with ED suggested a return to pre-mentalistic modes of thinking which, he advocated, arise from a disorganisation of the `self`. The author argued that if the `self` is poorly integrated, an individual may experience physical changes in the body as a loss of their own identity and sense of self (Fonagy et al., 2002). As the reader will see during the course of this thesis, it is suggested that if a person struggles to make sense of their inner experiences, they might concentrate their energy on the physical world, which might be more easily controlled and manipulated. This, in turn, might provide them with a sense of being in control and, hence, of relief. This last point is captured by the following quotes: `I think my anorexia helped to restore some order and direction to my life, and return to something more wholesome when my environment seemed overwhelming_, and, `My anorexia was there when everything else seemed unpredictable_ (Skarderud, 2007b).

In addition to this, building on Bruch's (1962) work that described a fragile sense of self, an inability to discriminate and articulate one's inner world (interoceptive confusion), and an inability to recognise, name and express emotions (alexithymia) in individuals presenting with difficulties concerning food, Skarderud (2007a, 2007b, 2007c) also adopted the concept of impaired mentalisation (Bateman & Fonagy, 2006). More specifically, the researcher suggested that the characteristic failure to understand one's own feelings and emotions, the concrete style of thinking, as well as the lack of reference to internal states when explaining behaviour, present in narratives of individuals with ED and SH, suggest a common lack of a mentalising stance (Skarderud, 2007b). Indeed, a recent review of the literature also indicated significantly higher levels of alexithymia in women who engage in SH, compared to women who do not engage in SH (Norman & Borrill, 2015).

Although it is arguable that most mental disorders involve some sort of difficulties with mentalising (Bateman & Fonagy, 2006), the issue is whether impaired mentalisation represents a core obstacle to treatment in individuals with ED and concurrent SH. Due to different levels of mentalising capacity potentially linked to different ability to engage in psychotherapy (Katznelson, 2014) and a lack of a mentalising stance may hinder the level of engagement in therapy (Bateman & Fonagy, 2007), it seems vital to investigate whether differences in mentalising capacity might be responsible for a more treatment-resistant symptomatology. In addition to this, the present study aims at addressing the issue of whether clients who might present a stronger need to control the body, displayed by resorting to both SH and ED symptomatology, might also display lower mentalising capacity. This seems important to investigate because a recent claim that suggests that psychotherapeutic approaches with individuals with poor mentalising capacity should specifically focus on the rehabilitation of this function (Skarderud, 2007, p. 324)

In this regard, it has been argued that traditional psychotherapy takes for granted individuals' ability for symbolic representation of one's own and others' mental states and that it presupposes that individuals are able to appreciate and differentiate their own subjective states from those of the therapist (Bateman & Fonagy, 2004). These reasons, as well as the characteristic thinking pattern that distinguishes individuals with impaired mentalising ability which will be discussed later, have led some professionals to suggest that people with impaired mentalising capacity do not benefit from traditional psychotherapy (Bateman & Fonagy, 2007). It can be argued that at the foundation of psychotherapy's process of change is the ability to balance 'story-making and story-breaking', in other words, the capacity to form narratives, and to disperse it in the light of new experience (Holmes, 1999). These tasks appear to be practically impossible for people who operate in pre-mentalistic states of mind, as will subsequently become clearer.

In conclusion, given that mentalising difficulties have been reported in both ED (Katznelson, 2014; Robinson, 2014; Skarderud, 2007) and SH presentations (Bateman & Fonagy, 2007; Rossouw & Fonagy, 2012), that individuals with different mentalising abilities might differ in their ability to engage in traditional psychotherapy (Bateman & Fonagy, 2007; Katznelson, 2014) and that SH has been correlated to more severe ED symptomatology, it seems crucial to investigate the relationship between ED, SH and mentalising further. To my knowledge, no study has addressed this so far, although a couple of researchers highlighted the importance of targeting SH in the ED population (Levitt et al., 2014; Peterson & Fischer, 2015). In addition to this, shedding some light on the relationship between the above variables also seems timely, given the reported successfulness of mentalization-based therapy (MBT; Bateman & Fonagy, 2004) in reducing SH in adolescents (Russeouw & Fonagy, 2012) and in individuals with ED (Robinson, 2015).

ED and SH specifically: Why? Findings from empirical studies. Childhood histories and social backgrounds of individuals who present with ED and SH difficulties appear to be quite similar: 'dysfunctional' families with a controlling mother and usually an absent or emotionally unavailable/preoccupied father (Lane, 2002). Both individuals who present with ED and SH appear not to have been 'held' appropriately in infancy, they seem to lack the ability to contain, express and regulate their own emotions (Preyde, Watson, Remers & Stuart, 2016). Sexual/physical abuse at an early age (Levitt et. al., 2004), lack of affection, or conversely over-involvement and disregard for boundaries also frequently occur (Kyriacou, Treasure & Schmidt, 2008).

Critical and feminist approaches emphasise, instead, theoretical perspectives that locate the roots of the disorders in the patriarchal context and the socio-political structures in which the

phenomena occur (Bell, 1985; Farber, 2007; Favazza, 1996; Katzman & Lee, 1997; McGilley, 2004) and that `force_ women especially to feel disempowered. Both syndromes have been linked to body dissatisfaction (Brannan, & Petrie, 2008; Olatunji et. al., 2015), internalisation of the `thin-model_, as well as the spread of Western standards of beauty and thinness (Nasser, 2006), ascetism, and a perceived sense of ineffectiveness (Favaro & Santonastaso, 2000, 2002). These factors appear to translate into the need to be in charge of one's own body (Favazza, 1998), possibly as an attempt to preserve an illusionary feeling of power in a life which is sensed to be out of control. In this regard, it is significant that both disorders are still indeed more common in the female population and typically develop during adolescence (Favazza & Conterio, 1988) which is a time of often puzzling, uncontrollable and confusing body changes.

Research has long identified early life relationships and subsequent interpersonal interactions as crucial for both disorders (Bruch, 1978; Gardener, 2001). Bruch (1978) suggested that a primary relationship in which the care-giver imposes their own sense of self on the infant fosters difficulties in the child's differentiation of their own feelings from those of their mother. Cutting, or defining one's own external boundaries through skeletal bodies might then be considered a way of differentiating oneself amongst the confusion of the symbiotic relationship and psychological oneness. Similarly, SH psychodynamic literature focuses on early years' experiences and inappropriate or disrupted attachment (Gardener, 2001); it associates SH with a "transitional object" (Farber, 1997; Favazza & Conterio, 1988). The self-harmer turns to cutting for the comfort it provides, just as the child turns to their teddy bear or blanket to soothe herself in the absence of the mother (Farber 1997). The following quote summarises this point: `cutting, burning and poking needles in my arm is a security for me, because I know that if all else fails and leaves me feeling emotionless and empty, the pain and blood will always be there for me_ (Favazza & Conterio, 1988).

In a similar fashion, people who suffer from an unmet insatiable hunger of love, perhaps mindful of the emotional unavailability of the primary attachment figures, might try to compensate for this unmet need through food. Again, this is captured by the following sentence: `I am a queen and these are my riches. I have all that I have ever needed in my life_ (Farber, 1997). Since our earliest connections with principal-others are inextricably mediated by the soothing flow of milk, and since food represents one of our earliest forms of communication, equating physical to emotional nourishment seems understandable. Hence, early life experiences and relationships/attachment appear to be crucial for the development of both ED and SH (Bruch, 1978; Gardener, 2001; Robinson, 2014). However, the origins of both also seem inextricably connected to the development of a sense of `self_ and mentalising, as the reader will learn shortly.

In 1962, Bruch described the core feature of AN as a `deficient sense of self_ which can be conceptualised prior to the development of a mentalising stance. Bruch commented on how it appeared that individuals who suffered from AN experienced their emotions in an overwhelming way, a finding also confirmed regarding individuals who engaged in SH, in the SH literature (Bateman & Fonagy 2004, 2007; Graff & Mallin, 1967). Bruch had further commented on how alexithymia, traditionally considered the antithesis for the capacity to mentalise, seemed to be a characteristic component of the illness. This has indeed more recently been confirmed by empirical evidence in both ED and SH presentations. Field findings support the hypothesis that people with AN appear to have difficulties identifying and communicating feeling states (Zonnevijlle-Bendek, Goozen, Cohen-Kettenis, Elburg, & Engeland, 2002), a conclusion also confirmed by a scientific review of the literature in other ED presentations (Taylor et al., 1997, as cited in Skarderud, 2009) and in people who engage in SH (Bateman & Fonagy, 2004, 2007; Norman & Borrill, 2015).

In addition, a recent study found that ED symptoms were more common amongst people who were described as alexithymic (Karukivi et al., 2010). To confirm this, a critical review of the literature on alexithymia and ED confirmed that alexithymia levels are elevated in individuals with ED compared to healthy controls (Nowakowski, McFarlane, & Cassin, 2013). The review further confirms that alexithymia levels seem to decrease in response to psychological treatments that place an emphasis on identifying and describing emotions and the authors suggest more intensive and focused treatment. To date, no specific research appears to have been conducted comparing alexithymia and mentalising explicitly; nevertheless, a recent study suggested divergent construct validity between a measure of mentalising and alexithymia (Moulton-Perkins & Rogoff, 2011). Hence, it is expected that alexithymia will be inversely correlated with mentalising. Should that be accurate, one might tentatively conclude that therapeutic interventions that decrease alexithymia levels increase mentalising.

So far, empirical support for mentalising theory comes mainly from attachment studies (Fonagy et al., 1991) and evidence suggests that individuals with a diagnosis of BPD, together with individuals diagnosed with ED, score lowest on the Reflective Function Scale⁴(RFS) (Fonagy, 1995; Perkins, 2009). To date, a fragile mentalising capacity, extremely sensitive to social and interpersonal interactions, is believed to be a core feature of BPD (Allen & Fonagy, 2007; Allen et al., 2008; Bateman & Fonagy, 2004, 2007) and ED (Skarderud, 2007). This has

⁴ The idiom reflective function (RF), also known as `theory of mind_ in developmental psychology, is the operationalised name of mentalising (Fonagy et al., 1998) and refers to the `psychological processes underlying the capacity to mentalise_ (Fonagy et al., 2002 p. 24).

prompted some researchers to suggest that treatment for these client groups should have a mentalising stance in focus (Skarderud, 2007), a claim which the current study is indirectly attempting to address. At present, the NOURISHED project is currently investigating the role of a mentalising-enhancing treatment, namely MBT, in individuals with ED and concurrent features of BPD (Robinson et al., 2014).

Whereas research on BPD and mentalising seems fairly robust, research in ED is scarcer and less straightforward. Some researchers have recently highlighted that individuals presenting with ED had significantly lower Reflective Functioning (RF) than other Axis I disorders (Fonagy, 1996; Møller, Kaufhold, Overbeck, & Grabhorn, 2006; Perkins, 2009; Rothschild-Yakar, Levy-Shiff, Fridman-Balaban, Gur, & Stein, 2010; Ward et al., 2001). In addition, Ward, Ramsay and Treasure (2000) studied mother-daughter pairs and found that RF was significantly lower in anorexic daughters and their mothers compared to psychiatric controls. Furthermore, the predominance of pre-mentalistic states of mind in individuals presenting with ED (Skarderud, 2007a, 2007b, 2007c, 2009) and a literature review by Ward and colleagues (2000) suggest strong links between insecure attachment styles, which hinder mentalising capacity, and ED. At the same time, Petersen, Lunn, Katznelson and Poulsen (2012) reported near to normal mentalising levels in individuals who presented with BN, despite atypical polarised scores.

These findings suggest that the relationship between ED and mentalising might be more complex than originally expected and that further studies are required to shed light on this. It is hoped that this thesis will address the gap in the literature and contribute to the field on several fronts: a) by exploring whether individuals with ED display less mentalising ability than a control group; b) by investigating whether individuals with comorbid ED and SH symptomatology will differ in mentalising skills from individuals with ED only.

Strong links have also been suggested between a lack of a mentalising stance in individuals presenting with ED and/or SH and extreme embodiment (Skarderud, 2007a). The body becomes a metaphor for inner states. Karen, who was hospitalised for AN, confirms this by saying that `when I am sad, I feel burdened and heavy...and then comes the urge to lose weight_ (Skarderud, 2007a). A self-harmer relates a similar concretisation and embodiment of emotions: There are times when I hurt too deep for tears, so I cut and it lets out some of the hurt. It's like when you see the blood flowing out, the pain and fear are flowing with it_ (Muller & Mathews, 2008).

Given the relatively new origins of the concept of mentalising and the difficulties of measuring the construct, research in the context of other psychological difficulties is also scarce. Traditionally, mentalising has been measured using the Reflective Function Rating Scale (Fonagy et al., 1998) developed for use with the Adult Attachment Interviews (AAI; Main &

Goldwyn, 1994). So far, empirical evidence using this procedure suggested that individuals with panic disorder did not show globally impaired RF (Rudden, Milrod, Target, Ackerman & Graf, 2006), nor did individuals with chronic depression (Taubner, Kessler, Buchheim, Kachele & Staun, 2011). Nevertheless, this scale is a unidimensional measure that is very extensive and requires training, which limited its applicability in the context of research.

Mentalising in History

Despite the concept of mentalising as it is known today being a fairly new one, it has been argued that both the French and the Anglo-Saxon psychoanalysts have used it extensively, the former, explicitly and the latter, implicitly (Allen & Fonagy, 2007). Furthermore, it can be argued that the conceptual origins of mentalising form a basis in several theories, amongst which cognitive psychology's theory of mind (Baron-Cohen, 2001), Bowlby's (1988) attachment theory, and Fonagy, Gergely, Jurist & Target's (2002) developmental model of the self.

In addition, it has also been suggested that the concept of mentalising was in some way present in Freud's notion of 'Bindung', which is universally translated as linking (Fonagy, 2001). Although the German analyst introduced several variations to this concept throughout his clinical work – which have been thoroughly detailed by Holt (1989, as cited in Erwin, 2002) – it seems that he mainly used the term to describe two distinct but related views. One of these suggested that Bindung referred to the qualitative change in which neural groups altered the trajectory of physical activity into a more associative and psychological one through the mental apparatus. This seems to be in concordance to the developmental notion of mentalising that suggests a progressive move from a physical (teleological) stance, to a more symbolic capacity for representation. For the reader's information, the latter two concepts will be thoroughly discussed later on in the course of this thesis.

Mentalising's early conceptual roots are further embedded in the French psychoanalytic tradition of Bouchard & Lecours (2008) who elaborated Freud's view of the mind and his Project's hypothesis on the Economics of Thoughts (Freud, 1895, as cited in Busch, 2008). Based on Marty and de M'Uzan (1963, as cited in Bouchard & Lecours, 2008) observation of unusual psychic modes of the functioning of psychosomatic patients, the authors present an intra-psychic notion of mentalising. Mentalising is described as the process that transforms drives into affect states and symbols through a gradually more sophisticated process of primary and secondary representations. By drawing on the distinction between 'representations', which arguably involve the development and use of a stable mental image and 'symbolisation', which connect representations, Bouchard & Lecours argue that the psychic apparatus elaborates, transforms and eventually integrates primary drives into mental representations.

For example, it has been suggested that the experience of fear corresponds to a primary (or first-order) representation because it only involves the physiological elements of the emotion. On the contrary, the ability to reflect on the concept of fear requires the existence of cognitive, behavioural, as well as physiological notions that correspond to the actual experience of fear. Hence, the latter is a secondary (or second-order) representation (Fonagy et al., 2002). This process of transformation, as described by the early work of the French psychoanalyst tradition, emphasises the fundamentally intra-psychic nature of this process by adopting a view that it would automatically happen from 'the sensation of the mental activity of the self' (Fonagy et al., 2003). However, it has been argued that this view, which seems almost a synonym for the development of ego functions (i.e., the capacity to control and regulate affect and impulses), separates the intra-psychic and the interpersonal element of mentalising (Bruch, 2008). The latter point was addressed by drawing on Kernberg's theory (as cited in Fonagy, 2001).

By suggesting that the transformation of affect into drives happens in the context of a relationship with the object (Kernberg, 1976b, as cited in Fonagy, 2001), which eventually gives rise to the 'self', Bouchard & Lecours (2008) propose that mentalising can be viewed to emerge from a complex process that includes both the infant's auto-representational and auto-symbolic instinctual demands, as well as a more inter-subjective aspect. Whereas early psychoanalytic theories strongly rejected the latter view, more recent paradigms emphasise a more inter-subjective component as the core condition for fostering the development of mentalising (Fonagy et al., 2002; Fosshage, 2000; Stolorow, 1997). Regardless of the theoretical position, it has been argued that all the above modes imply a breakdown in the progression from primary to secondary order representations (Fonagy & Target, 1997); hence, a failure in symbolic representation, which, as described above, involves the development and use of a stable mental image.

Furthermore, regardless of the controversy as to the speculated origins of mentalising, all authors give accounts of a lack of a mentalising stance as a pervasive mode of functioning characterised by (a) affect dysregulation; (b) an overwhelmed and confused psychic apparatus that uses mental rejection as a form of protection; (c) primitive forms of thinking (i.e., a reduction in the capacity for mental elaboration and symbolisation and concrete thinking; (d) absent sense of subjective agency 'empty presence' (Marty & de M'Uzan, 1963, as cited in Bruch, 2008); (e) enactments. More recently, these features have been extensively documented and regarded as typical thinking patterns of individuals who present with ED and SH (Bateman & Fonagy, 2004, 2007; Fonagy et al., 2004; Skarderud, 2007).

On the contrary, the Anglo-Saxon object-relations position on the origins of the concept of mentalising can be differentiated from its Francophone counterpart in that it moves away from a more philosophical stance, narrows its meaning and bases the idea on inter-subjectivity. Amongst those psychoanalysts, the name of Bion (1962) stands out as the precursor of the theory of mind. Bion's focus on the origin of thought itself, rather than on the process of mentalising, pioneers the role of a 'thinker' who can contain and think these thoughts. According to the author, thoughts without a thinker (Beta elements) need to be transformed through the capacity to think (Alpha function) into thoughts with a thinker (Alpha elements), which can eventually be mentalised. Crucial for this process, according to Bion, is also the role of the mother as a container and metaboliser for the child's intolerable affect states. It has been suggested that it is only through this interpersonal containment that overwhelming affect and drives can be metabolised into tolerable and thinkable experiences (Bion, 1962). Only through having their intolerable affect held by an attuned care-giver, the infant learns to hold it themselves.

Bion equated this process of containment to frustration tolerance which, as suggested, individuals presenting with ED and SH significantly struggle with. Bearing in mind what has been discussed above in respect to the social environment of the population in question, difficulties with emotions-regulation seems understandable. Since it has been argued that the containment process requires mentalising, which is a modulator for strong, overwhelming affect (Allen et al., 2008), one can conclude that a poor capacity to contain one's own emotions might be an indicator of poor mentalising.

Bion's (1962) interpersonal element is further elaborated by Winnicott (1971, as cited in Fonagy, 2001; Fonagy et al., 2002) who foremost amongst other theorists emphasised the uppermost importance of the caregiver's attuned mirroring for the emergence of a mentalised sense of 'self'. It has been suggested that it is only through the good-enough mother's capacity to reflect back the infant's inner states that the child will find their mind (Fonagy et al., 2002). Winnicott argued that if the mother is preoccupied, or indeed distressed by external factors, the infant will only perceive her own emotions reflected back, rather than their own, a claim that seems to mirror Bruch's (1974) statement. This will arguably impact on the child's ability to 'find themselves' and to explore self/others' inner world. Hence, it appears that the quality of early life dyadic relationship (the attachment quality) and the frequency with which an infant's mind has been kept in mind is crucial for the development of a reflective function. It can confidently be stated that developing the ability to mentalise depends on being mentalised (Allen et al., 2008).

As previously discussed, there is increasing evidence that suggests that difficulties around food, body image and SH are connected to poor quality of parent-child attachment (Bruch, 1978; Gardener, 2001; Zachrisson & Skjærderud, 2010). Hence, the thesis will now turn to the role of early relationships for the capacity to mentalise.

The role of Early Relationships for the Capacity to Mentalise

The notion of a sound and secure relationship between the infant and the principal caregiver is also the corner stone of Bowlby's (1988, as cited in Fonagy, 1996, 2001) paradigm. The author also disregarded early psychoanalysts' emphasis on unconscious processes and the developmental stages of the ego, and suggested instead that children are biologically predisposed to seek affectional bonds. Such ties are called 'attachment' when there is an exclusive, significantly asymmetrical relationship with a principal caregiver who becomes irreplaceable. Whereas for early psychoanalysts the emotional attachment was secondary to the gratification of oral needs, Bowlby stated that the attachment's system's primary aim was initially the physical, and subsequently a more symbolic emotional proximity to the attachment figure in an attempt to feel safe. This was also confirmed by Harlow's (1959) studies on rhesus monkeys that downplayed the role of the caregiver as meeting primitive needs and emphasised, instead, the comforting and emotional role of the attachment figure.

Harlow's (1959) most renowned study, which was prompted by Bowlby's (1950) report, *Maternal Care and Mental Health*, featured the availability of surrogate mothers for infant rhesus monkeys. These surrogate mothers, which were made by either wire and wood or cloth, were presented under two conditions. In one condition, the wire mother held a bottle with food and the cloth mother held no food; in the other condition, the cloth mother held the bottle and the wire mother had nothing. The results of the study clearly confirmed the importance of comfort contact of the primary relationship as the infant monkeys consistently chose to spend time with a cloth mother compared to the wire one even when only the latter could provide food. This clearly demonstrated that there was more than 'oral gratification' to the 'mother/infant interaction.

Attachment theory further suggested that the quality of the attachment leads to the internalisation of mental representations (Internal Working Memory, IWM) of the 'self', others, and how we relate to ourselves and others. For example, if an infant's attachment figure is attentive, caring and loving towards the child, the little one's working model of themselves is most likely to be of positive self-worth. At the same time, based on the infant's positive experience of being nurtured, their IWM of others will most likely be that they are emotionally available, kind and considerate. On the contrary, it has been claimed that a preoccupied caregiver is likely to foster representational systems of the child being unworthy of care/love

and of others being unavailable and/or rejecting (Fonagy et al., 2002). Hence, it appears that the IWM as described by Bowlby (1950) is a set of mental representations that the child uses to relate to the world and to make it predictable. This arguably allows the child to mainly unconsciously to interpret, plan, decide and develop prototypes for future life relationships.

The secure/insecure attachment system, as emerging from the basis on the caregiver's ability/inability to provide safety, support and a secure base from which to explore the world (Bowlby, 1988 p. 140), generates self-others representational mapping that appears to be strictly connected to the reflective function of the self, the base for the ability to mentalise (Fonagy & Target, 1997).

Indeed, whereas it can be argued that the earliest psychoanalytic and object-relation models described above are primarily speculative, a lot of empirical evidence has been gathered to support attachment theory and to link some of the above ideas that suggest that mentalising develops in the context of a secure relationship in which the caregiver accurately mirrors the infant's internal states. For example, Ainsworth's (1985) Strange Situation procedure, which gave rise to the classification of attachment patterns, provides strong evidence for a child's IWM. In the cited experiment, a toddler's response to the caregiver and a stranger entering and leaving the room are observed during a play session. Particular attention during the procedure is placed upon the child's reactions to the departure of the caregiver and the child's reaction upon the caregiver's return. It is universally accepted that such reactions are influenced by the child's internalised rules, learned from the principal caregiver, for displaying and communicating negative emotions.

Procedural instances have shown how some children display anxious/avoidant insecure attachment styles and might avoid or ignore the caregiver altogether, outwardly exhibiting little or no distress, nor happiness upon the attachment figure's departure and return. This is arguably because their attachment needs have been rejected in the past and/or those parents might have not been available to meet the baby's needs (Ainsworth, Blehar, Waters & Wall, 1978; Fonagy et al., 2002). As a result, the child has learned that communication of needs has no influence on the caregiver's behaviour towards them. On the contrary, a more Anxious-Ambivalent/Resistant and clinging behaviour has been observed when the caregiver has been inconsistent in their care-giving responses towards the child (Bowlby, 1977). This is a behaviour that appears an attempt to pre-empt the inconsistency and maintain closeness.

A distinct, more disorganised pattern of attachment was observed in children exposed to major trauma/neglect and/or whose parents suffered major loss (Main & Solomon, 1986). Those children displayed overt fear in the presence of the caregiver, but also co-occurring contradictory behaviours and affects, stereotypic or jerky movements, or freezing and apparent

dissociation. This could arguably be due to the child's previous experience of the principal attachment figure, who is expected to be the source of comfort and a rescuer from distress, is also the source of threat or fear. It can be argued that these reactions, which have been interpreted as the attachment system been flooded, might mirror the confusion of the child's IWM.

On the contrary to this, empirical evidence revealed that a child who is securely attached to their principal caregiver and who has an IWM of the attachment figure as caring, attentive and available, will feel safe to explore their own environment and display their distress, knowing that the caregiver will be attentive and responsive to their emotional needs (Ainsworth et al., 1978). Evidence suggests that those children have parents who support them in achieving a sense of balance and control with respect to the management of negative and positive emotions (Steele & Steele, 2005). The authors also reported how it appeared evident that the message that those children had learned was that unmanageable negative feelings could have been coped with by turning to the caregiver.

The link between parental mentalising, and its aptitude to reflect upon and deal with distress and the quality of the primary relationship has further been evidenced by findings from the Adult Attachment Interview (AAI). The AAI is an interviewing technique in which the subject is asked about one's own childhood experiences and aims to measure the level of mentalising in the adult through an analysis of the participant's discourse. With respect to what is mentioned above, George, Kaplan and Main (1985) administered the AAI to expectant mothers and reported that their narratives predicted attachment classification at the age of one (Fonagy, Steele & Steele, 1991b). For example, dismissing narratives in the AAI predicted avoidant attachment whereas preoccupied narratives predicted anxious-resistant attachment styles. Similarly, confusion and disorganised discourses were predictive of disorganised Strange Situation behaviour; finally, coherent and reflective discourses predicted securely attached infants.

This measure, which provides a strong and reliable tool for measuring the relationship between parental reflective functioning, the quality of the primary relationship and their links to emotional regulation in the toddler, is further strengthened by other empirical evidence that also testifies to the connection between mentalising, meta-cognitive capacity (memory, comprehension and communication; Moss et al., 1995, as cited in Fonagy, 2002) and the theory of mind (Fonagy, Steele, Steele & Holder, 1997; Meins, Ferryhough, Russel & Clark-Carter, 1998 as cited in Fonagy & Target, 1997). The theory of mind (ToM), originally described by Premack and Woodruff (1978, as cited in Schlinger, 2009) in non-primates, was subsequently employed in developmental psychology to describe the steps by which children develop an

understanding of other's mental states and perspectives and the capacity to predict others' behaviours. The 'social-affective' component (emotional ToM: eToM) concerns the former, whereas the 'social-cognitive' component (cognitive ToM: cToM) involves the latter (Tager-Flusberg & Sullivan, 2000).

As suggested at the beginning of this section, ToM provides the basis for developing the capacity to mentalise. It is a theoretical model that explains the cognitive processes of mentalising and although for most of the 1980s and 1990s, the majority of the research on mentalising has been carried out under the name of ToM, the latter term has recently been criticised for being too narrow and neglecting the relational and emotional aspect of understanding behaviour (Fonagy, Gergely & Target, 2007). According to Baron-Cohen, Leslie, and Frith (1985, as cited in Schlinger, 2009), 'The ability to make inferences about what other people believe to be the case in a given situation allows one to predict what they will do'. Indeed, the hallmark for acquiring the ToM is passing the 'false belief test' (Winner & Perner, 1983 as cited in Allen et al., 2008), a scenario in which the child is asked about the beliefs of someone (a protagonist) who has been exposed to different conditions from those of the child themselves. The aim of the test is to assess the child's capacity to take the perspective of the other.

A classic example of this is the following: 'Child X places some chocolate in a particular location and then leaves the room; in his absence the chocolate is moved to another location. The child is then asked where child X will look for the chocolate on his return' (Winner & Perner, 1983, as cited in Schlinger, 2009). Children who have developed a ToM will understand that upon his return child X will still look for the chocolate in the same location where it was left, hence comprehending that child X has a false-belief. Children who have acquired this understanding are aware of their own minds, the mind of others, as well as the connection/disconnection between the two. They seem to appreciate that the mind does not reflect reality as such, but rather that it is a representational system and that what we are aware of depends on the information we have been exposed to. As the reader will learn later, these points seem to be problematic for people who present with ED and SH.

The compelling relationship amongst the concepts described so far is confirmed by empirical evidence that suggests that 84% of securely attached children pass the 'false belief test' at age 4, compared to 33% of insecurely attached ones (Meins, Ferryhough, Russell & Clark-Carter, 1998 as cited in Fonagy & Target, 1997). Furthermore, 82% of securely attached children tested in the Strange Situation procedure passed the belief-desire task compared to 46% of insecurely attached (Fonagy et al., 1997). Many other examples of such links between attachment quality, cognitive, symbolic and mentalising functions are given in Fonagy et al.

(2002), Allen and Fonagy (2007), Fonagy (2008), Busch (2008), and Allen et al.'s (2008) studies. Due to space restrictions, no further evidence will be discussed here, but the reader can refer to the above references for a more detailed account of other empirical evidence. Nevertheless, evidence so far clearly demonstrates a significant correlation between the above and a crucial role of the attachment system in the development or hindrance of these functions and subsequent psychopathology.

In particular, there is general agreement amongst researchers and clinicians that the quality of the secure attachment is paramount for allowing the child the freedom to engage in symbolic, as well as in cognitive exploratory activity (Fonagy et al., 2002). Conversely, when the quality of the relationship is poor and the infant's emotional states are not appropriately held, or there is over-involvement and over-stepping of boundaries, the infant's exploratory skills are suppressed as they attempt to make sense of their own affective experiences.

The journey through the history of mentalising has finally taken us to the most recent origin of the concept of reflective functioning. The latest advancements are attributed to a developmental theory of the 'self' (Fonagy, 1991) and the empirical work carried out by Fonagy and Target (1997), amongst other clinicians (Bateman & Fonagy, 2004; Fonagy et al., 2002; Sharp, Fonagy & Goodyer, 2006). These researchers expanded the cognitive notion of the ToM to include several other facets, amongst which the relational, emotional and affect regulative aspects, characteristic of mentalising. The theory builds on a model that suggests that the attachment relationship is not only fundamental for the survival of the infant, but also for the development of the 'self' and the ability to experience and conceive of mental states. Hence, Fonagy suggests that the ability to mentalise develops in the context of an early secure relationship in which the primary caregiver is able to accurately mirror the infant's states of mind.

It has further been argued that this mirroring, provided it has specific characteristics that will be discussed later in the course of this thesis, will eventually create the basis for the child's symbolic capacity and affect regulation (Bateman & Fonagy, 2007), which are the foundations for the ability to synthesise conflicting emotions. This, in turn, will lead to an integrated 'self' experience (Skarderud, 2009). The latter point is poignant for the research question as it can be argued that the absence of a reliable internal self-regulation might cause some vulnerable individuals to feel out of control internally, hence to concentrate all their energies towards developing extreme forms of body control. It has further been argued that an inability to regulate overwhelming affect might make some individuals intensely vulnerable to alienation between the 'psyche' and 'soma' leaving the body to carry the burden of emotional expression (Lane, 2002).

Overview of Theories of the Development of Mentalising⁵

Before reviewing the developmental theory of the self, it seems helpful to have an overview of the controversy surrounding the reasons for the development of the precursor for the ability to mentalise in human beings. Although there is a general agreement as to the stages of development of this function, and the ability to experience and conceive of mental states seems to emerge hand in hand with 'self-organisation', disagreement still reigns as to how and why a ToM emerges. It seems important to explore this at this stage because, as was discussed above in relation to the development of the concept of mentalising in history, trends also seem to move away from more intra-psychic explanations, which favour biological and cognitive mechanisms in which the child is an isolated organism, whose development happens from within.

Baron-Cohen and Swettenham (1996, as cited in Fonagy & Target, 1997) ask 'how on earth can young children master such abstract concepts as beliefs (and false beliefs) with such ease and roughly at the same time the world over?'. The researchers put forward a Modularity theory: reflective function is an innate ability which is located 'in the form of separate modules' in a specific part of the brain and that gets automatically activated by the environment. According to this model, one of the child's first achievements is the understanding that others are able to move on their own (Theory of Body; Flavell, 1999, as cited in Sandquist, 2010) whereas subsequent modules range from awareness of intentionality to goal-oriented actions. The paradigm claims that when all modules are activated, the ability to mentalise is acquired through a process that goes hand in hand with age.

Another example of a hypothesis that suggests an innate predisposition to the acquisition of the ToM is the Theory-Theory (Gopnik, Meltzoff & Kuhl, 2000). This, however, despite suggesting an inborn aptitude as the Modularity paradigm, presents several differences from the former. For example, in the first instance the Theory-Theory emphasises a more cognitive aspect and views the processes that underlie the reflective function as applicable to all knowledge, rather than just applicable to specific features that characterise the ToM. In other words, the Modularity theory claims that the innate processes that determine the essential character of the ToM are part of our genetic endowment; yet those processes do not apply to other cognitive domains. Instead, the model suggests that those processes only apply to the

⁵ The reader is reminded that for most of the 80s and 90s, empirical research on mentalising was carried out under the broader term of Theory of Mind. Hence, the literature reviewed in this section primarily uses the broader term to describe an awareness of others' mental states. The writer will use mentalising, reflective function and Theory of Mind interchangeably for this section of the thesis only. More details as to why it is now generally agreed that mentalising and Theory of Mind are not equivalent will be discussed later on in the course of this paper.

specific procedures underlying reflective functioning. On the contrary, Theory-Theory suggests that these processes are identical to the processes which underlie scientific reasoning and that are used by children to learn about the world (Scholl & Leslie, 1999).

According to the latter model, children actively experiment and explore the world and develop scientist-like theories that allow them to make predictions and to assess evidence. The researcher suggests that skills like joint attention, imitation and memory help the child to develop theories, which are then assessed as new information is acquired. However, it has been argued that initially children have a bias for counter-evidence, which is distorted and re-interpreted in terms of the child's schemas. Nonetheless, it has been suggested that as counter-evidence accumulates, eventually children will seek alternative explanations and theories which ultimately replace the original ones (Gopnik et al., 2000). According to the researcher, these theories foster mentalising through a continuous series of reorganization of the child's thoughts based on the input from other individuals and the environment, which again, seems to have a crucial role.

Whereas it is understandable how this theory has successfully been applied to children's understanding of the physical and the biological world (Gopnik et al., 2000), it seems that it lacks a deeper exploration of emotional content. Fonagy et al. (2002) argued that both the Modularity and the Theory-Theory paradigms focus on mechanisms rather than on content and that whilst those theories provide an explanation of how and when the child acquires knowledge of others' minds, they do not explore how the child feels about these mental states. Yet, the researchers argue that knowledge and emotional content cannot easily be separated, as is evident in clinical cases of individuals with extreme anti-social tendencies where the individual might know what the other person feels, but lacks empathy, or indeed even interest.

A another cognitive theoretical standpoint that attempts to describe how the ToM develops is the Executive Function Hypothesis (Carlson, Moses & Brenton, 2002, as cited in Sandquist, 2010). This theory emphasises how the ability to mentalise seems to be correlated with executive functioning and suggests that general executive functions are responsible for the development of an awareness of others' perspectives and other non-verbal faculties. Sandquist (2010) reminds us not to overlook the role of language in the development of mentalising and encourages us to consider a bi-directional relationship between general language skills and reflective function. Although there is agreement that language is the vehicle for communication of mentalising interactions, it has been argued that in order for language to function accordingly, the subjective world has to have developed an internal structure and organisation. Internal states need to have a meaning in order to be expressed through language (Fonagy et al., 2002).

Despite acknowledging the role of the external environment for the development of a ToM, all of the above-referenced paradigms appear to neglect the bulk of empirical evidence that, instead, emphasises the crucial role of the caregiver and the quality of the attachment relationship to the principal caregiver. This is also the limitation of the Simulation theory, that nevertheless takes a slightly different perspective and suggests that the ToM emerges when the child mentally simulates what he or she thinks the other person might feel, think or do (Harris, 1991, as cited in Sandquist, 2010) or what he would do in the imagined circumstances (Goldman, 1993, as cited in Fonagy & Target, 1997). However, despite this approach linking reflective function to social interaction in that it is argued that the skill in question flourishes inter-personally, nevertheless it still does not give enough recognition to the universally-acknowledged exclusiveness and the quality of the emotional bond with the caregiver. This last point, instead, is emphasised in developmental psychology's new paradigms and in particular, in the developmental theory of the 'self'.

Developmental Theory of the 'Self'

The developmental theory of the 'self' positions itself in a very controversial philosophical, as well as psychological debate: that of the relationship between the mind and the body, crucial in both ED and SH. Ever since Descartes argued for the existence of the mind separate and distinct from the body, the question of whether the mind and the material body can interact whilst being ontologically different has often been in the forefront of social sciences' controversy.

The precursor for the theory of the 'self' is unanimously recognised as James's (1890, 1892, as cited in Fonagy & Target, 1997), who proposes a distinction between different aspects of the 'self': the 'I', regarded as the subjective 'self' (the knower), and the 'me', considered as the object 'self' (the known-self). The former is believed to be the one responsible for organising and making sense of the 'me', which is instead the mental representation. A similar notion appears to be echoed by Gergely and Unoka (2008, as cited in Karerud & Bateman, 2011) who, nevertheless, focus on how the core 'self' develops into the reflective 'self'. However, whereas it appears that early notions of the acquisition of a sense of 'self' favour intra-psycho processes, subsequent models become more inter-personal in nature. In particular, Gergely and Watson (1996) put forward a 'Social Biofeedback Theory of Parental Affect Mirroring' that deems representational loops between the infant and the caregiver responsible to achieve second-order representations.

According to this model, newborns come to this world with a rich innate set of emotions and perceptual and learning capacity. The paradigm argues that the infant's perceptual system is innately predisposed to attend to external stimuli and to build representations on the basis of such stimuli (Fonagy et al., 2002). However, according to the researchers, there is no empirical

evidence to support the Theory-Theory model. The latter relies on the Cartesian assumption that mental states are accessed through introspection, that these affect states automatically activate conscious feelings in the infant and that the child automatically attributes emotional states to others. Instead, Fonagy and colleagues suggest that the infant gradually learns the emotional content of their innate emotions through observing their own affect states being mirrored back by the caregiver. This is a point, together with the empirical evidence on the social background of individuals who present with ED and SH, that seems to shed some light on some of the difficulties that this ED/SH groups display in recognising their own emotions.

Fonagy et al. (2002) describe how in healthy development the parent approaches the infant as if it had mental states. This was clearly illustrated in the first example discussed at the beginning of this thesis when the mother-described regarded her daughter's tantrum as an expression of internal states of mind. The child's behaviour was not seen as a physical reaction to a physical world, but as an expression of intentionality (Fonagy et al., 2002). Unconsciously regarding the infant as an intentional agent instantly places the little one and the caregiver in a perpetual, non-conscious set of affective and communicative exchanges whereby the principal attachment figure non-consciously recognises, reflects upon, contains, metabolises and mirrors back the infant's mental states (Verheugt-Pleiter, Zevalkink, & Schmeets, 2008). The authors, agreeing with the 'Social-Biofeedback Theory of Parental Affect Mirroring' described this process as representation loops that start with the baby as the unaware subject of first-order representations.

These representations are reportedly recognised by the caregiver and given back to the child in the form of secondary representations, which will eventually allow the baby to understand their own feelings and develop second-order representations (Verheugt-Pleiter et al., 2008). Furthermore, it has been hypothesised that it is this repetitive and consistent mirroring that will eventually allow the child to recognise their own affective states and to map those onto the 'correct' cognitive understanding of the emotion (Kim et al., 2014). However, the nature and quality of this mirroring has been argued to be crucial for this process to happen. In particular, it has been suggested that for mirroring to constitute the basis for the development of a safe and contained affect representational framework, it has to possess two fundamental features: 1) contingency and 2) markedness. In other words, the mirroring has to be accurate (contingent) enough to display the child's own affect, but it also has to incorporate some contrasting features (markedness), which allow the child to recognise that this is not how the caregiver feels.

For example, in the event that the young child's fear is recognised and mirrored by the attachment figure, the reflection of the affect state ought to be accurately representing the primary emotion, in this case, fear. The repetition and consistency of this action will eventually

organise the child's emotional experience and allow the little one to understand how and what they feel. However, the 'good-enough' caregiver's representation of the child's fear also ought to exhibit some kind of markedness and incongruence in order for the child to realise that this is not the caregiver's affect and, hence, not to feel overwhelmed. It has been argued that it is the attachment figure's reaction, which is accurate enough, yet different enough from the child's own, that creates the basis for symbolic second order representations (Fonagy, 2001). It is arguably the 'difference that makes the difference' (Bateson, 1972, as cited in Dallos & Draper, 2005).

If the mirroring is marked, but not contingent, such as in cases in which the caregiver represents their own affective state, rather than the child's, the baby will experience a categorically incongruent representation. For example, the case of a mother who misrepresents the child's excited behaviour for naughtiness. In that case, the mother will try to make sense of the child's affect according to her own internal state and might possibly attempt to modulate the child's affect with a stern and harsh response. Due to the strong markedness, the affect might be separated from the parent and attributed by the baby to themselves, ascribing it to their first order representation. However, if the mirroring does not match the child's internal state, the establishment of second-order representations will be problematic and might result in distorted secondary and 'self' representations. Subsequent affect regulation will also be based on distorted second-order representations which, however, have little connection to the first-order ones; hence, emotional experiences might be perceived as not 'real' and words might fail to describe and connect to feelings. Winnicott (1960a, as cited in Fonagy, 2001) described this process as the emergence of a 'false' self; Fonagy et al. (2002) coined the term 'alien self'.

When non-contingent mirroring predominates, the connection between the infant's internal state and external reality, and cognitive development may be characterised as a 'pretend mode' in which there is little perceived connection between internal and external reality (Weinberg, 2006). Empirical evidence currently suggests that mentalising-failure is linked to childhood attachment trauma (Fonagy, 1989; Leuzinger-Bohlerber, Canestri & Target, 2010), that traumatised children cannot learn words for feelings (Beeghley & Cicchetti, 1994) and that traumatised adults struggle more to assess intentions behind facial expressions (Fonagy et al., 2003). These last points are crucial for the present research as it is widely documented that people who present with ED and SH might report inner experiences as being disconnected from outer reality, struggle to put their distress into words, lack an emotional vocabulary for their inner states (alexithymia) and use, instead, their body as a substitute (Bruch, 1978, 2001; Skarderud, 2007).

Instead, in the eventuality that the mirroring does not display the necessary 'markedness' that allows the infant to decouple the affect from the attachment figure, the child will assume that the representation is the caregiver's real emotion. In this instance, the caregiver's affect appears magically to mirror the infant's internal experience (Weinberg, 2006). Hence, the little one will not be able to attribute the affect state to themselves and, as a result, they will not be able to develop second-order representations. Weinberg (2006) argues that this experience underlies the functioning of the 'psychic equivalence' mode, in which internal reality is assumed to be identical with external reality. Furthermore, due to the child relying on the caregiver for affect regulation, the infant's negative emotional state will escalate even further and it will result in the child feeling overwhelmed. This will result in deficiency in both self-perception and self-control of affect (Fonagy et al., 2002) and the child will seek alternative ways of making sense and containing a psychological world in which his affective states are poorly represented. In this regard, some researchers have suggested that a categorically congruent, but unmarked affect mirroring might play a role in the development of defensive mechanisms such as 'projective identification' (Fonagy et al., 2002) whereby the child externalises the overwhelming parts of the 'self' and relocates those persecutory experiences in the object.

The literature suggests how, in both cases, ordinary psychic developmental phases can persist and how incongruently contingent or unmarked mirroring can create a vulnerability for later distortions of subjectivity (Weinberg, 2006). Evidence confirms this as there is agreement that, although the infant has some very basic skills to self-regulate one's own affect by either turning away from over-arousing stimuli or thumb-sucking (Demos, 1986; Malatesta et al., 1989, as cited in Fonagy et al., 2002), the principal caregiver plays a crucial role in affect-regulation. In this regard, Malatesta et al. (1989), amongst others cited in Fonagy et al. (2002), present evidence that sensitive mothers are skilled readers of their babies' affect and that they tend to attune their own affective response to modulate that of child. This process seems not to have happened for individuals who later develop ED and/or SH.

Hence, Fonagy's developmental theory of the 'self' (Fonagy et al., 2002) rejects the Cartesian assumption that mental states are understood by introspection and argues instead that a sense of 'self' develops from experiencing oneself being perceived by others as thinking and feeling. However, it is understandable how, in order for the child to be able to conceive of themselves and others as having a mind, the baby has to have developed a symbolic representational system of mental states; what Bouchard and Lecours (2008) described as stable mental images. Furthermore, in order for the child to be able to reflect upon the 'self' and the object, these representations must not only be present, but also accessible, coherent in the child's IWM and also linked in time (Karterud & Bateman, 2011). This function, which

connects representations, is what Bouchard and Lecours called 'symbolisation'. Again, the researcher turns to Fonagy et al. to describe the necessary steps a child undergoes in order to achieve this symbolic capacity.

The origins of the ability to mentalise

Fonagy and colleagues (2002) suggest that in healthy development an infant goes through five levels of developmental tasks of 'agency of the self'. These phases include: 1) a physical; 2) a social; 3) a teleological; 4) an intentional and 5) a representational or symbolic phase. There is now widespread agreement that the organisation of the 'self' starts with the physical domain. It has been suggested that through the perception of one's own body and bodily-related experiences, the infant gradually learns to appreciate the boundaries between the 'self' and the world. Numerous studies reported that infants are attuned to contingent relationships between stimuli and physical responses (Bahrick & Watson, 1985; Field, 1989; Papousek & Papousek, 1974 as cited in Fonagy et al., 2002; Watson 1994, 1995, as cited in Fonagy et al., 2002). The researchers suggested that the main function of the contingency-detection mechanism is that of the detection of the "self" as separate from the environment. Interestingly, research suggests that whereas initially infants prefer perfectly contingent stimuli, as their development continues, non-perfectly contingent stimuli are preferred, suggesting an awareness of boundaries between the "self" and the outside environment.

Several empirical examples further report that around the age of three months a shift happens; by consistently interacting with an attentive caregiver, it appears that the baby gradually develops an awareness of themselves as social 'agents'. Aristotle (as cited in Owen, 1965c) described human beings as 'social animals' and indeed empirical evidence confirms this hypothesis as it has been reported that as infants start developing a preference for non-perfectly contingent stimuli, they move away from self-exploration towards the 'other' and the social world. Studies report that, already from the first few months of life, babies actively seek interactions with significant others, and that the facial expressions of either one is predictive of the facial expressions of the other (Beebe & Lachmann, 1988; Beebe, Lachmann & Jaffe, 1997, as cited in Verheugt-Pleiter et al., 2008). Further evidence suggests that infants have a natural predisposition towards facial features and familiar voices and that they automatically engage in 'prototypical conversational turn-taking' (Fonagy et al., 2002).

Fonagy and colleagues (2002) emphasise how interactions at this stage are pre-symbolic and non-mentalised in that the infant does not hold a representation of the caregiver's states of mind and although the baby's actions might have reference to future goals, their ability to modify their behaviour to reach a goal is not yet developed (Piaget, 1936, as cited in Fonagy et al., 2002). The researchers report that infants younger than six to eight months would repeat

behaviours that had previously been successful in reaching an objective, without modifying their behaviour to take into consideration new obstacles. Furthermore, evidence suggests that the child's capacity to influence the caregiver's affect at this early stage of development is also severely limited.

However, it has been noted that as the 'social self' develops and babies start to interact more with the external environment, a new shift occurs. Around the ninth month of life it seems that a child's understanding of themselves as active agent takes a leap: the child gradually learns to modify his/her actions in response to changes in the environment and becomes able to adapt his/her behaviour to reach a specific goal. For example, it has been shown that only children over the age of eight months remove an obstacle placed between themselves and a desired object (Piaget, 1936), whereas younger children would give up, or change the desired objective. In addition, other changes have been reported in the child's ability to communicate with others. In this regard, an increased capacity for joint attention actions has been shown, such as following adult gazes and child-led actions such as object-pointing (Fonagy et al., 2002). Tommasello (1999, as cited in Fonagy et al., 2002) described this stage as a social-cognitive revolution and coined the term 'intentional stance' to refer to this newly developed ability to initiate goal-directed actions.

The former authors, instead, describe this as a 'teleological stance' in that the child's understanding of the world happens in the context of the outcome that follows the action, rather than in the context of a causal inference. They suggest that outcomes only appear to be conceived when they bring about physical changes. This feature, characteristic of a pre-mentalistic state of mind, is a prominent feature of the population the current study is focusing on and represents an inability to symbolise, to conceive of mental states as representations. More will be discussed in the course of this thesis regarding this feature in ED and SH. Nevertheless, in normal development, the teleological stance seems to bring about an understanding of goals as separate from the means to reach them.

The difference between Tommasello (1999) and Fonagy's (2002) conceptualisation of the shift that happens in the child at around the age of nine months is based on three main assumptions: 1) the role of simulation in understanding others as goal-directed agents; 2) understanding of the 'self' versus the 'other'; 3) the origins of mentalising. These differences will not be discussed here in detail and the reader is referred to Fonagy et al. (2002) for a full account. However, the main difference relates to the researchers' stance in relation to the origins of an awareness of causal intentional mental states, and whereas Tommasello suggests that joint attention skills seem to imply an awareness of others' mental states, Gergerly rejects this claim.

Fonagy's developmental theory of the 'self' suggests, on the contrary, that an initial awareness that actions are preceded by prior intentional states emerges around the second year of life and that this is the time when the emerging 'self' seems to start developing the ability to think in terms of some mental causation. Around this time, which seems to represent the beginning of the 'intentional mental agent position', it appears that children develop a 'naïve theory of mind', a basic understanding that people have wishes that might be different from their own and that others can have desires and wishes without necessarily acting on them. Children now appear to be able to engage in comforting behaviours towards others and they appear to act on others' preferences. For example, research reports that 18 month olds were able to differentiate between their favourite food and the one of the experiment's co-participant; a finding that was clearly shown by their feeding the co-participant with the food for which they had previously expressed a preference. This result was not replicated in 14 month olds who, instead, gave the food they themselves preferred (Repacholi & Gopnik, 1997 as cited in Fonagy et al., 2002).

Research also suggests that children at this age begin to conceptualise actions in terms of rationality and coherence and they start generalising their knowledge, expecting more predictable outcomes and stable attributes. Some argue that this is the emergence of James' concept of 'me, the known-self, the self-reflecting actor'; actions, thoughts and feelings appear to become more and more 'mine' (Karterud & Bateman, 2011), as displayed by an increasing use of the pronoun 'I'. Indeed, developmental psychology has long argued that this is a time of great changes, when self-awareness emerges, as demonstrated by the Rouge test (A Amsterdam, 1972; Gullup, 1991, as cited in Fonagy et al., 2002). The Rouge test is an experiment in which a red dot is drawn on the child's nose in an attempt to observe whether the little one will try to wipe it off when placed in front of a mirror. Empirical evidence shows that by 18 months of age, 50% of children can recognize themselves in the mirror and by 24 months of age, most children will touch their noses. Interestingly, it also appears that there is a connection between self-awareness and emotions as it has been reported that most children will act shy if increased attentions is paid to the dot on their nose.

Whereas it seems that the above might be sufficient evidence to suggest an initial mentalistic stance at this age, some researchers have observed that self-recognition is also present in chimpanzees and children with autism, both of which seem to lack a ToM (Fonagy et al., 2002). Furthermore, children do not comprehend the rationale underlying the 'false-belief test' until much later which suggests that a mature understanding of different mental states and diverse perspectives is still lacking (hence the term 'naïve theory of mind'). In particular, it seems that although at this stage, children have developed an awareness that others might have different wishes and desires, they still lack symbolic capacity. In other words, it appears that

children at this age still lack the capacity to think in abstract terms, to play with and to conceptualise of reality and mental states as representations. Difficulties which have been extensively reported in the adult population on which the study focuses on.

The task of developing abstract thinking and mental representations seems to be the last stage of the maturity of the `self`, which is the most complex and sophisticated stages of all in that it implies the integration of all the concepts described so far. Fonagy and colleagues (2002) speak of this step as the understanding of the `self and others as representational agents` and they place this phase between the ages of four and five. Around this time, it appears that the toddler, provided that they have been nurtured by most of the necessary conditions described so far, reaches a more advanced appreciation of mental causality which allows them to move away from the physical to the more abstract realm of reality. This seems to be the time when children learn to play with their inner world and reality, and conceptualise of mental states as being about reality, rather than reality itself. This marks the difference between attributing the fear that monsters might be hiding under the bed to one's own emotional state and attributing the fear to the fact that monsters might be under the bed.

Perner (1991b, 2000b as cited in Fonagy et al., 2002, p. 244) speaks of mental representations `as the understanding that mental states are about some` real or hypothetical` state of affairs that can be evaluated as true or false in relation to such a state of affair`. He further claims that this is a necessary prerequisite for the understanding that actions are caused by representations of reality, rather than reality itself. Crucial to the emergence of this ability, together with a `good-enough environment and a good-enough mother` seems to be playing. It can be argued that it is through play that the child learns to `have fun` with reality, to adopt different perspectives and to imagine that others are different from what they normally are in a safe and contained way. It can further be suggested that it is during play that the child learns to separate between inner and outer worlds, fantasy and reality, whilst still being able to hold both in mind. As the reader will learn, these are crucial points for the population in question.

It is the ability to conceive of oneself as a representational agent, to have a symbolic capacity for reality and to have the ability to hold several representations in mind that marks this phase of development and that differentiate it from the previous stage in which the child was only able to hold one representation of themselves in mind. Indeed, in the pre-representational stage of the `self`, the child, still existing in pre-mentalistic states of mind, was unable to differentiate between inner and outer reality. Around the second year of life, the toddler was only able to hold one representation of the `self` at the time (Pvinelli, 1999 as cited in Fonagy et al., 2002) which they could then compare to a previously held representation. This included the `self's` physical features and actions. Instead, it appears that this newly acquired skill allows

the child to pretend to be a super-hero whilst `knowing_ they are still their usual `self_'. In this regard, Bateman and Fonagy (2008) relate the curious anecdote of a three year old boy who, when looking at himself in a mirror, wearing an extremely realistic Batman fancy-dress that the boy himself had asked as a gift, became frightened. Reportedly, the little boy refused to wear the costume again and resorted back to using his mother's skirt as his Batman cloak.

Instead, it appears that around the fourth year of life, the child whose growing environment was good enough, becomes more able to simultaneously hold several representations of themselves and others in mind without feeling threatened: the child can be both a realistic Batman and his usual `self_' without fearing disintegration. It appears that the ability to hold and connect several representations at the same time fosters the capacity to link different representations into a temporal coherent narrative. Hence, an autobiographical self is said to emerge, able to put together events in chronological order and to make sense of them. This skill, which is shown to develop around the sixth year of life, seems to demarcate the switch between procedural to declarative memory and, it is argued, to epitomise the goal of the developmental course (Karterud & Bateman, 2011), the establishment of a strong sense of autobiographical `self_', able to sustain different `selves_' representations into an organised, coherent and meaningful narrative.

To conclude, the Cartesian doctrine of "cogito, ergo sum" has traditionally fostered the illusion that individuals have direct and infallible access to their own mental states through introspection. This has prompted some researchers to suggest that knowledge of the "self" as a putative being is innate and that infants are naturally pre-wired to recognise their own inner states. However, more recent advances in the field of cognitive, developmental and attachment domains have reported a more complex and inter-subjective process in action that sees both the infant and the principal attachment figure engaged in perpetual communicative and emotional feedback loops. Provided that the quality of the attachment relationship is good-enough, it is the caregiver who, by constantly and consistently interpreting and mirroring the infant's mental states, facilitates the child's understanding of their own affect. However, in order for this to be possible, it is necessary that the baby has mental representations of the `self_' and of others, and that these are retrievable in the child's IWM in a coherent time sequence in which there is a `principal self agent_'.

It has been argued that mentalising, which is acquired through being the subject of a mentalising other, integrates James's notion of the `I_' as an active agent and the `me_' as the representational `self_' (as cited in Fonagy et al., 2002). This appears to provide the `self_' with a sense of cohesion by giving meaning to changing `selves_' and putting them in the perspective of one's own life (Karterud & Bateman, 2011). Indeed, mentalising has been argued to tap into

levels of personality organisation (Katznelson, 2014). Without a mentalising stance, it can be argued, an individual might feel totally out of control internally and feel at the mercy of one's own changing states and inner and outer events (Karterud & Bateman, 2011). Living in pre-mentalistic states of mind, that imply a teleological and concrete stance, with a lack of symbolic capacity and ability to think in abstract terms, might drive such individuals to seek more tangible substitutes to control overwhelming states. The body being one of those substitutes.

Furthermore, the development of a mentalising function is considered a separate issue from the ability to mentalise and research has shown that the latter can be context specific (Allen et al., 2008). Just as mentalising capacity need an optimal level of arousal to develop, findings have suggested that mentalising failure tends to happen in the context of an aroused attachment system, particularly when conflicts and strong emotions develop, as well as with little emotional arousal. In order to mentalise, the level of arousal needs to be optimal. In this regard, images studies report that the activation of the areas of the brain that mediate attachment simultaneously deactivates brain parts that foster social judgment and mentalising (Bartel & Zeki, 2000, as cited in Lenzinger-Bohleber et. al., 2010).

Domains, Dimensions of Mentalising and Related Concepts

The above section described the healthy development of a mentalistic 'self', which, if the necessary conditions are present, ought to develop as a coherent autobiographical narrative, grounded in a temporal sequence and mainly able to self-regulate affect by the age of six. This mentalistic 'self' has been argued to include a sense that 'there is something that it feels like to be me' (Searle, 2004, as cited in Allen & Fonagy, 2007), a sense of agency 'a feeling of doing' (Marcel, 2003, as cited in Allen & Fonagy, 2007) and it has been suggested that it is anchored in emotional states (Damasio, 1999 as cited in Allen & Fonagy, 2007). Mentalising encapsulates all these aspects and, indeed, it allows individuals to be aware of what's going on in their own or someone else's mind. However, as previously discussed, the detection, decoding and reasoning about mental states, is also the function of the ToM.

However, although mentalising and ToM 'and especially eToM' might seem similar, and are often used interchangeably, they do not have identical status in 'the body' (Debbane et al., 2016) and in explaining mental distress (Gorska & Marzsal, 2014). Whilst the literature on ToM addresses the cognitive development of mentalising, it appears to fail to encapsulate the relational and affect regulative aspects of interpreting behaviour (Allen & Fonagy, 2007); it also focuses primarily on others, rather than on the self. Further, mentalising sets itself apart for its inherent attention to four dimensions: modes (implicit/explicit), subjects (self/others), aspects (cognitive/affective), focus (internal/external) (Fonagy & Bateman, 2012; Fonagy & Luyten, 2009). In addition, mentalising sets itself apart because, besides understanding one's own and

others' mental states, it entails the regulation and transformation of one's own emotions, through understanding others' intentions, feelings, and beliefs (Gorska & Marzal, 2014). Ultimately, mentalising is elaborated on the basis of physiological arousal and emphasises interdependency between the mind and the body (Debbane et al., 2016), requiring the activation of relational and emotional representations, as well as the processing of emotional experience. Instead, e-ToM refers to 'cold' knowledge (Gorska & Marzal, 2014).

It can be suggested that the emotional aspect of mentalising is somehow covered by the concept of empathy, defined as an 'awareness and appropriate emotional response to a representation of another's internal state' (Allen et al., 2008). Nevertheless, as in the case of ToM, the domain of empathy is narrower compared to the concept of mentalisation: empathy often entails empathy for others, rather than for the self. Indeed, this attention for the cognitive and emotional aspect of psychological states is encapsulated in the term 'mindfulness', defined in the Buddhist literature as 'keeping one's consciousness alive to the present reality' (Hahn, 1975, as cited in Allen & Fonagy, 2007).

In more specific terms, the concept of mindfulness refers to a non-judgmental, emotionally detached awareness of current experiences, as well as present reality (Allen et al., 2008) and implies a calm attentiveness to one's bodily functions, feelings, and thoughts, as well as to consciousness itself, an awareness that mentalising incorporates and expands. Mentalising further directs this attentiveness not only towards the present, as in mindfulness, but also towards the past and the future. Hence it appears that mentalising sets itself apart for being a multi-dimensional concept which embraces a number of overlapping concepts that make up its topography, although none shares the exact same boundaries (Allen et al., 2008). Some of these concepts (ToM, mindfulness, empathy and alexithymia) are strictly relevant to the current study and the researcher has made a pragmatic decision, for reasons that will be later discussed in the Method section, also to evaluate these adjacent concepts.

Whereas empirical findings on the relationship between mentalising function and empathy, mindfulness and alexithymia seem more unanimous, findings on the relationship between RF and ToM and are, to-date, more ambiguous. For example, evidence suggests that ToM, and especially eToM, is a core issue for individuals presenting with EDs (Schmidt, Oldershaw, & Van Elburg, 2011). However, whereas Perkins (2009) found a significant correlation between RF and ToM, other studies suggested the opposite. Both Taylor, Target and Charman (2008), and Rogoff (2011) reported no correlation between RF and ToM. In addition, Moulton-Perkins and Rogoff (2011) also reported inconclusive results when investigating convergent construct validity between the RFQ-54 and the RMET (the ToM measure) and suggested that the RMET might be correlated with external mentalising, rather than internal.

This claim might also explain Fertuck et al. (2009) findings when measuring the accuracy of facial emotion recognition in individuals who present with features of BDP. Although the mentioned client group reportedly struggle with mentalising functions, it reported significantly high scores in RMET performance after controlling for gender and depression.

It has been suggested that whereas the RFQ assesses mentalising by considering internal processes, the RMET measures the external dimension of this ability (Perkins, 2009). Due to individuals who present with BPD features potentially using judgments based on a characteristic thinking pattern that places an extreme focus upon physical appearances and actions (Bateman & Fonagy, 2004), they might be better skilled at reading physical cues. Given that similar thinking patterns have recently been reported in individuals presenting with ED, if the current study finds a non-significant correlation between mentalising and ToM, one might wonder whether similar processes might operate.

Of worth mentioning is the few studies to-date which have explored whether eToM is impaired in ED; these studies mainly concentrate on AN (Medina-Pradas, Blas Navarro, & Alvarez-Moya, Grau & Obiols, 2012). Current research suggests eToM is impaired in individuals presenting with AN compared to control groups (Harrison, Sullivan, Tchanturia, & Treasure, 2009; Russell, Schmidt, Doherty, Young & Tchanturia, 2009). This finding was independent of illness severity (Russell et al., 2009) and slightly correlated to global functioning, prompting Medinas-Pradas et al. (2009) to wonder whether the results might represent a global cognitive deficit rather than a specific deficit in eToM. Nevertheless, Harrison et al. (2010) reported a negative correlation between ED and eToM ability, suggesting perhaps a specific link between eating psychopathology and ToM. In addition, although Oldershaw, Hambrook, Tchanturia, Treasure, and Schmidt (2010) reported difficulties in reading emotions from others' voices or film clips in AN symptomatology compared to control, they found no group differences when inferring complex emotions from others' eyes.

Given that the RMET uses eyes' clues to infer a subject's emotion, this last finding might perhaps shed some light on some of the negative results found on the correlation between mentalising and eToM when using the RMET to measure the latter. In addition, when emotional valence was taken into consideration, Oldershaw et al. (2010) concluded that individuals with AN displayed more difficulties than a control group at reading positive or negative emotions (i.e., relieved, worried), but did not display any deficiencies on neutral emotions (i.e., suspicious). In contrast, Medinas-Pradas et al. (2009) reported difficulties in overall accuracy and emotionally neutral cognitive states. In particular, the latter study suggested that the BN group had more difficulties in reading positive emotions, whereas the mixed ED group did not differ from a control when reading negative emotions. Lastly, the researchers reported no

differences in the RMET (overall or valence accuracy) in the AN group in relation to the control. Ultimately, although results on emotional valence might shed some light on the complexity of the relationship between mentalising and eToM, by suggesting perhaps that some presentations might struggle more with specific emotions, there is scarce literature about the eToM ability of ED patients and the results of the studies are contradictory (Gorska & Marzsal, 2014).

A nother conceptual term related to mentalising is alexithymia, which was briefly mentioned at the beginning of this thesis. Regarded as a core feature of mentalising, alexithymia was originally defined as a multi-faceted concept including four distinct characteristics: (a) difficulty with identifying and describing feelings, (b) difficulty distinguishing feelings from bodily sensations, (c) diminution of fantasy, and (d) concrete and poorly introspective thinking. More recent definitions have omitted the intra-psychic conflicts and emphasised, instead, deficits in the cognitive processing and regulation of emotions (de Berardis et al., 2007). Despite constant gender-differences that lead some researchers to advance a `Normative Male Alexithymia_ hypothesis (Levant et al., 2009), it is evident that low alexithymia is a necessary and essential pillar for the ability to mentalise. Explaining behaviours according to mental states presume that one has a vocabulary for such emotional states.

Other related concepts include: mindblindness, emotional intelligence, psychological mindedness, rationality, imagination, reflexivity, verbalisation, symbolisation, representation, metabolisation, insight, introspection and awareness. Despite acknowledging the importance of explicitly differentiating these notions from the core concept of the study, the researcher is aware that some of the above have indirectly been discussed before and that some others will further be considered in the course of this project. Hence, due to space constriction, a pragmatic decision has been made to avoid making obsessive distinctions (Allen & Fonagy, 2007).

The information discussed above has broadly highlighted some of the proposed dimensions of mentalising: the cognitive/affective and the self/other oriented. A recent factor analysis on the RFQ-46 and 54 confirmed the existence of an `internal self/internal other_ subscale (Moulton-Perkins & Rogoff, 2011; Perkins, 2009). In addition, as previously mentioned, the literature suggests the existence of two more polarities: an implicit-automatic/explicit-controlled and an internally/externally based one (Fonagy & Luyten, 2009). Whereas most mentalising in everyday interactions happens implicitly, psychotherapeutic interventions are an example of explicit mentalising in that clinicians specifically focus and try to foster explicit mentalising. This attention can target inner states (internally based), or visible cues such as, for example, one's observable tiredness (externally based). Furthermore, Fonagy et al. (2002) highlighted a special feature that relates to the affective dimension of mentalising

and that further distinguishes it from the other related concepts. This feature, called 'mentalised affectivity', seems paramount for the understanding of some of the difficulties individuals with ED and SH present with and is defined as the capacity to connect the emotional experience to the meaning of the emotion whilst remaining in the affective state, rather than from a distance.

Fonagy et al. (2002) identified three elements of mentalised affectivity. The first has been argued to be the recognition of the emotion, which includes labelling, something which the population of the study appear to struggle with. Although this might seem a basic skill, it is not uncommon for people to experience 'aporetic feelings' (Jurist, 2005, as cited in Allen et al., 2008), vague and confused emotional states that are initially difficult to distinguish. Furthermore, communication within individuals and within families varies considerably and it is not uncommon for families to avoid, or even ban, negative emotions in particular. There comes to mind a lovely client of mine who was brought up in an environment that emphasised selflessness and self-sacrifice towards others, in particular towards one's own parents and relatives. Growing up, this kind and considerate young lady was subjected and later subjected herself to extreme self-neglecting behaviours in order to prioritise and meet others' needs: she had always been told that she could not be angry because being a carer was her duty as a woman.

Once affective states are recognised, it is possible to modulate them (second element). This includes toning them down or up in order to reach the optimal level of emotions that fosters additional mentalising and that prompts these states to be further reevaluated. Evidence suggests that mentalising shuts down in the face of intense emotions (Allen et al., 2008; Bateman & Fonagy, 2004; Fonagy et al., 2002). Lastly, the third element of mentalising appears to be the capacity to express affect, either outwardly or inwardly, when the former is not feasible. These three elements have so far been discussed almost in a temporal sequence so that one precedes the other. For example, it seems reasonable to consider that there cannot be modulation, or expression of emotions without having first identified what the emotion is and there cannot be efficient expression if the emotion is not moderated first (Allen et al., 2008). However, the researchers remind us not to assume that the concepts are fixed in this sequence and they speak of a continual alternation between the elements. For example, recognising that one is angry, modulating the affect and communicating it might help the individual to further reevaluate their affect, which in turn might have an impact on the identification of the new emotion, which might have an effect on its communication.

It is apparent that mentalising is an extremely complex function that incorporates several other related functions and roles and that is responsible for numerous tasks. As can be imaginable, then, its precise biological make-up is difficult to outline, just as the specific

location of concepts such as the `self_ is virtually impossible to pin down. Fonagy (1995, as cited in Busch, 2008) suggests that a number of areas in the brain are involved in the development and successful functioning of mentalising. These regions include a part of the brain that processes social stimuli, parts such as the amygdala and the hypothalamus that are responsible for affect regulation and a third area that controls cognitive functions. Ultimately, the author argues that the biology of mentalising lies with a number of neuronal structures and the dynamic processes between them.

Pre-mentalistic states of mind in eating disorders and self-harm

It has been suggested that the early `self_ is characterised by primitive forms of thinking with virtually no capacity for mental elaboration. Inner and outer experiences seem conceptualised primarily in concrete thinking styles and causality seems to be only understood if it produces tangible changes to the environment. The child appears to be able only to take into account their own perspective and boundaries between the `self_ and the outside world are blurred. Hence, whereas pre-mentalistic states of mind are universal developmental stages in all human beings and not necessarily an indicator of psychopathology, they become an issue when the child/adult resort to those as the primary, inflexible `default setting_ (Fonagy, YEAR, as cited in Weinberg, 2006). Already, early psychoanalysts had identified some of these features in individuals with psycho-somatic difficulties (Marty & De M`Uzan, 1963 as cited in Busch, 2008) and linked these difficulties to a lack of a mentalising stance.

This seems in keeping with the theory of a development of the `self_ prior to the emergence of the `representational or symbolic stance_. At the same time, this also appears to be in keeping with more recent literature and empirical findings concerning people who appear to use the body as a vehicle of communication (Bateman & Fonagy, 2004, 2007, 2010; Busch, 1962; Skarderud 2007).

The latest discoveries suggest that a failure in mentalising capacity precipitates a thinking and a representational pattern typical of developmental modes that precede the awareness that thoughts, feelings and wishes are part of the mind (Busch, 2008). Impaired mentalisation causes individuals to exist in `pre-mentalistic modes of functioning_ (Bateman & Fonagy, 2004, 2012, 2013; Fonagy et al., 2002; Luyten, Mays, Fonagy, Target & Blatt, 2015; Weinberg, 2006; Widiger, 2012). This seems to be particularly evident in individuals presenting with ED and SH, who display difficulties in understanding their own feelings and emotions, a concrete style of thinking, as well as a lack of reference to internal states when explaining behaviour (Bateman & Fonagy, 2007; Bruch, 1962; Skarderud, 2007). It has been argued that these attributes contribute to an alienation between the `psyche_ and the `soma_ (Farber, 1995),

with the consequent embodiment and concretisation of inner life (Skarderud, 2009) and the body left to carry the burden of emotional expression (Lane, 2002).

In this respect, Skarderud (2009, p. 72) warns that 'when mentalising is impaired, the body may take on an excessively central role for the continuity of the sense of 'self', literally being a body of evidence'. Individuals who engage in SH and/or who present with ED cannot put their distress into words and use, instead, their body as a substitute. The concept of embodiment introduces the reader to one of the pre-mentalistic states of mind, the Teleological stance, already discussed it in the context of the origins of the 'self'. When functioning in this mode, expectations concerning one's own and others' agency and change cannot be conceived unless it is in physical terms (Fonagy et al., 2001). As previously discussed, whereas this can be an ordinary developmental stage, it is problematic when it becomes an inflexible way of functioning. One's own fear of not being in control of the inner and the outer world becomes displaced into fear of not being in control of one's own eating/body. Rejecting food becomes a metaphor for rejecting closeness (Steiger & Israel, 1999) and asserting one's own independence from an environment in which boundaries might be disregarded (Thompson-Brenner, 2015). Starving oneself, bingeing, cutting, burning, physical pain become the only conceivable ways in which psychological distress can be expressed.

It has been reported that people who present with ED experience low levels of self-esteem, high feelings of inadequacy and unrealistic degrees of perfectionism (Daley et al., 2008; Vohs et al., 1999). Similar findings have been reported in people who engage in SH in respect to dissatisfaction and a sense of ineffectiveness (Favaro & Santonastaso, 2000, 2002). It can be argued that, unsatisfied with their life and with themselves, they strive hard to change and to reach what are often unattainable goals. At the same time, functioning in the teleological mode means that changes are conceived only in terms of physical changes, hence, changes to the body. Freud (1962) had suggested that it was through body-control that the Ego achieved a sense of mastery. Therefore, it can be argued that having complete power over one's own body becomes, for people who engage in ED/SH, a defence against feelings of inadequacy and lack of control.

Similar issues have been reported in the therapeutic encounter whereby individuals functioning in the teleological mode often request extra protocol actions such as more sessions, telephone check-in in between meetings or even physical affection as a contingent proof that the therapist cares (Bateman & Fonagy, 2004, 2007; Skarderud, 2009). Far from considering this a manipulation on the behalf of the client towards the therapist, or indeed a weakness on the part of the therapist who might sympathetically offer appropriate extra support, Bateman and Fonagy (2007) encourage professionals to understand this from the perspective of the individual with

limited mentalising capacity. The notorious clinicians argue that people who function in the teleological mode are 'forced to provoke visible evidence of concern from others because of their limited capacity to experience concern in circumstances in which others whose mentalising capacity was intact would not find any reasons to doubt it' (p. 24). At the same time, the authors encourage clinicians to reflect on process issues.

Whereas the teleological mode represents the most developmentally primitive of all pre-mentalistic states of mind in that it is temporarily positioned before the acquisition of language, it is by no means the only one. For example, the young toddler mentioned by Bateman and Fonagy (2004) who became frightened because his Batman fancy-dress was too realistic, or the child who is terrified because convinced that there is a monster under their bed are all, at times too painful, anecdotes. Whereas in these two vignettes the examples reported might be developmentally appropriate, in some of the population seen by many clinicians, these states of mind represent a painful barrier to change. Just as seen in the two examples, individuals presenting with ED and SH seem to equate the internal with the external: internal reality is projected onto external reality which, as a result of the projection, becomes the only possible reality (Psychic Equivalence Mode of functioning). Fantasy and reality become one: the 'as-if' attribute of experience is inconceivable.

This mode of functioning, which can be equated with the concept of magical thinking mentioned in the portfolio case study, can be utterly terrifying. To cite the case study that follows, to a child who employs magical thinking, a furious and murderous wish of retaliation towards the parent potentially makes them their parent's killer, leaving them feeling utterly guilty and terrified that their internal world has been capable of so much. The product of poorly marked mirroring, psychic equivalence means that the child's fear that 'there is a monster under my bed' becomes reality. Equally, the traumatised and abused individual who has experienced malevolence from others and who has been told that it is their fault and that they are bad, who feels undeserving of love, knows that others are evil, that the world is dangerous and that they themselves are bad and worthless. No other alternative explanation is possible. Flashbacks and traumatic memories also become unthinkable because to think about them would mean to re-live them in the strictest sense of the word.

In the therapeutic alliance, as well as in general interpersonal interactions, the Psychic Equivalence Mode usually translates into inflexible and rigid thinking patterns in which the individual claims that they know what the other person feels/thinks. Internal reality, as perceived by clients who live in the Psychic Equivalent Mode, becomes the only possible way to understand external reality. Bateman and Fonagy (2007) describe 'inappropriate convictions of being right, extravagant claims of knowing what is in someone else's mind, or why certain

actions were performed [...] no information can be provided that would shift or dislodge that attitude. The affective tone [...] is commonly characterised by paranoid hostility, [...] genuine grandiosity [...] and idealisation/denigration. Zanarini, Gunderson, Frankenberg and Chauncey (1990) portrayed the typical vividness and peculiarity of these experiences as 'quasi-psychotic symptoms'.

Considering Holmes' claim – already mentioned at the beginning of this thesis – namely that at the foundation of psychotherapy's process of change is the ability to balance 'story-making and story-breaking' (Holmes, 1999), it seems now clearer how these tasks appear to be practically impossible for people who operate in the Psychic Equivalence Mode. Fantasy becomes reality: the only possible and conceivable reality. The capacity to form representational images of ideas and feelings is severely compromised and a direct relationship between the self and the outside world is assumed. Whereas operating in this mode is developmentally appropriate in young children, as understanding desires precedes understanding beliefs (Wellman & Cross, 2001, cited in Allen & Fonagy, 2007), this mode of functioning becomes problematic when both desires and beliefs are referential, but not representational (Allen & Fonagy, 2007). Both desires and beliefs are about something/someone, but are conceived as strictly connected to the object.

An opposite mode of functioning to the Psychic Equivalence has been observed in individuals with low mentalising functions in general, in individuals with psycho-somatic difficulties (Bouchard & Lecours, 2008; Fonagy et al., 2004) and more recently in people presenting with features of BPD, ED and SH (Bateman & Fonagy, 2004, 2007; Skarderud, 2007, 2007a, 2007b, 2009). This contrasting 'modus operandi' is called the Pretend Mode. Whereas inner and outer reality were equated in the former, the reverse is true for the latter. In the pretend mode, the sense of pretend has stretched to the extreme and the mental world is disconnected from external reality, an idea that had been introduced when discussing marked, but non-contingent mirroring. Ideas form no bridge between inner and outer reality and emptiness and meaninglessness are characteristic reported features of this state of mind.

When operating in this mode, individuals' experiences feel dissociated from outer reality, and thoughts and fantasies seem to have no connection to feelings. Whereas developing a sense of pretend in respect to mental states has been described as being essential in freeing someone from the vividness of the Psychic Equivalence Mode (Allen & Fonagy, 2007), the radical and excessive stance of the Pretend mode means that mental representations are so disconnected from the outer world that internal experiences are perceived not to be grounded in reality. In this respect, it has been argued that it is this lack of reality of internal experiences that is behind people starving themselves or committing acts of self-mutilation/suicide, because the

continued existence of the `self_ is perceived not to be dependent on the existence of the body (Bateman & Fonagy, 2004).

Search for meaning becomes compelling for these individuals as their lives are perceived to be meaningless. It has been suggested that the intrinsic dissociation between inner and outer reality characteristic of the Pretend mode can give an indication of why individuals presenting with ED and/or SH report feeling so confused about their feelings and their physical sensations (Skarderud, 2009). As a consequence, in therapeutic encounters, operating under the Pretend mode often implies meaningless conversations, whereby clients might engage in lengthy discussions about their mental states and their experiences without any actual emotional involvement. This, if not appropriately addressed, can lead to ineffective and stagnant clinical encounters.

The aim of the above discussion was to give an indication of how difficulties around food can be explained in terms of pre-mentalistic states of mind. The terms, which stemmed as part of a particular theory of `self_ development, provide insight and clarity and have widely been accepted in the literature (Bateman & Fonagy, 2004, 2012, 2013; Fonagy et al., 2002; Jimenez, & Moguillansky, 2011; Luyten et al., 2015; Lysaker, Dimaggio, & Brune, 2014; Tandon, 2008; Weinberg, 2006; Widiger, 2012; Williams, 2010). However, it is recognised that these terms are derived from clinical practice rather than from psychometric measures, hence remain to be subjected to empirical tests of their construct validity.

The literature has so far suggested that individuals tend to oscillate between states, alternating modes (Bateman & Fonagy, 2004). This is particularly true when the attachment system is activated (Bateman & Fonagy, 2004). So, if on the one hand vulnerable individuals might be able to mentalise normally when not emotionally aroused, this function seems to collapse severely when the attachment system is stimulated. As a consequence, the teleological stance forces individuals to conceive of change only in concrete terms and the negative self esteem characteristic of this client group urges them to make concrete and physical changes, for example to target the body. On the other hand, the psychic equivalence mode can explain how individuals might experience intense and overwhelming negative emotional states, often associated with ED and SH, as literally getting bigger and expanding. Yet again, functioning in the pretend mode might mean that one's own experience of one's own body might be incongruent (Skarderud, 2009).

The same can be argued for individuals presenting with SH. Releasing blood by cutting might be perceived as the only way to release some of the overwhelming feelings of anger and hate. Self-harm is like a scream without words, painful, distraught, unbearable, which can only

find expression through body-suffering. Cutting, burning, purging or starving, as a consequence, becomes compelling, almost addictive, in order to displace mental pain and to give it a meaning.

Nevertheless, regardless of which specific mode of functioning is activated, it can be argued that the mind with impaired mentalising capacity struggles to comprehend itself, let alone someone else's frame of reference. This would have serious implications for the individual's capacity to engage in meaningful therapeutic exchanges, for traditional psychotherapy's focus of treatment on the enactment (Levitt et al., 2004), for the therapist's stance (Bateman & Fonagy, 2007) and for current common practices such as 'no-harm contracts' (Rudd et al., 2006). Indeed, if it is possible that individuals with low mentalising capacity struggle more to engage and benefit from traditional psychotherapy which takes for granted people's capacity to mentalise, certainly this needs to be explored in order for more effective treatments to be developed. This is partly the aim of the current study.

Critical Review of the Literature

The present research is, to my knowledge, the first study that attempts to outline the relationship between mentalising ability, ED and SH in a clinical population. As part of this journey, several related theoretical concepts and unrelated, but potential contributing and mediating factors were reviewed. In particular, the current thesis hypothesised a link between attachment, the development of mentalising and the aetiology of teleological symptoms such as ED and SH behaviours. This is the literature that this section aims to critically appraise.

In order to do this, I will initially reflect on the role of the early, primary caregiving relationship and its alleged part in the development of mentalising and ED/SH symptomatology. I will also take into consideration mediating factors as the present study described and endorsed the literature that suggested that a lack of congruent and marked mirroring might make some individuals vulnerable to the development of teleological symptoms via the inhibition of the capacity to mentalise (Fonagy et al., 2002). Eventually, Fonagy's mentalising theory and the four proposed dimensions (Fonagy, Bateman & Luyten, 2012) of mentalising will be reviewed, paying attention to aspects that need clarifying.

Intriguingly, both attachment and mentalising have recently become a focus of research (Caglar-Nazali et al., 2014; Kuipers & Bekker, 2012; Tasca, & Balfour, 2014) and have been deemed to be relevant in the understanding of adult eating disorder symptomatology either as causal explanatory factors, or as maintaining factors (Caglar-Nazali et al., 2014; Connan, Campbell, Katzman, Lightman & Treasure, 2003). However, whilst attachment theory seems to be an important framework used to understand the possible factors involved in the aetiology of ED and a strong empirical relationship has been found between insecure attachment and the

development of EDs (Cole-Detke & Kobak, 1996; Orzolek-Cronner, 2002; Ringer, & Crittenden, 2007;; Sharpe et al., 1998; Ward et al., 2000) and SH (Hallab & Covic, 2010; Fergusson, Woodward, & Horwood, 2000; Glazebrook, Townsend & Sayal, 2015), the exact nature of this relationship is still elusive (Ward et al., 2000).

The same can be said for the relationship between attachment and mentalising ability, whose dynamics still seem to be unclear (Liljenfors & Ludh, 2014) and affected by several factors (Fonagy et al., 2012). As far as the SH literature goes, it seems to echo the above findings with the majority of studies associating insecure attachment, and in particular relational avoidance, to aggressive behaviours towards the self (Critchfield, Levy & Kernerberg, 2008; Farber, 2008; Glazebrook, Townsend & Sayal, 2015; Hallab & Covic, 2010) and mentalising-failure to SH (Badoud et al., 2015; Cucchi, 2016; Grandclerc, De Labrouhe, Spodenkiewicz, Lachal & Moro, 2016; Remaschi, Cecchini & Meringolo, 2015).

In the field of ED, Sharpe et al. (1998) found that insecurely-attached individuals reported higher weight concerns than their securely attached counterparts. As the reader might be aware, weight/shape concerns are consistently the most replicated and most potent risk factors for developing an ED (Jacobi et al. 2004b). In addition, Mallinckrodt, McCreary and Robertson (1995) reported a strong correlational support for a model which explained how attachment-trauma can contribute to the later development of eating disorder pathology due to dysfunctional attachment's interference with the development of critical social competencies. Furthermore, Tereno, Soares, Martins, Celani and Sampaio (2008) also found that mothers of control groups reported more secure attachment than mothers of individuals who presented with ED. Conversely, Kenny and Hart (1992) found that securely-attached women reported lower levels of weight preoccupation and ED behaviours than their ED counterpart. Whilst correlations are by no means a proof of causation, these findings' together with a recent review of the literature between attachment and ED symptomatology (Jewell et al., 2016)' confirm the link between insecure attachment and ED in adults.

It can be argued that the above mentioned studies use cross-sectional study designs to examine associations between attachment security and eating pathology and that, despite providing valuable information, cross-sectional study designs do not arguably provide strong evidence about the role of attachment in the aetiology of ED (Jewell et al., 2016), or indeed SH. Indeed, when prospective, longitudinal studies are taken into consideration, this relationship appears more complex. Some studies confirmed a prospective association between attachment and eating pathology by reporting insecure attachment toward mother to be significantly predictive of increases in dietary restraint and eating, weight and shape concerns in the children at one year follow up (Goossens, Braet, Van Durme, Decaluwe & Bosmans, 2012). A similar

result was confirmed by Colton, Olmsted, Daneman, Rydall and Rodin (2012) who reported attachment to be predictive of new ED symptomatology one year later.

Likewise, insecure attachment was shown to be predictive of increased rates of SH in a longitudinal study of adolescents (Glazebrook et al., 2015), confirming cross-sectional studies that link the two (Critchfield et al., Farber, 2008; Hallab & Covic, 2010; Levy & Kernerberg, 2008).

On the contrary, Milan and Acker (2014) reported no evidence of a direct association between attachment and disordered eating attitudes and behaviours, but discovered that attachment style moderated the relationship between adolescent ED risk factors (such as BMI) and ED behaviours. The lack of an association between attachment and ED symptomatology was also confirmed by Burge et al. (1997) and Le Grange, et al. (2014). In addition, although several studies investigated whether and which potential mediating factors might be influencing the relationship between attachment and ED (Tasca & Balfour, 2014) and SH (Cuenca, 2013), at present no clear answers have been found. For example, both Tasca and Balfour (2014) and Ty and Francis (2013) identified affect regulation as one such mediator of the relationship between attachment and ED and attachment and SH (Kimball & Diddms, 2007), whereas Illing, Tasca, Balfour and Bissada (2010) found that attachment anxiety was significantly related to greater severity of eating disorder symptoms. The current research endorsed the idea that the concept of mentalising might provide a helpful concept to understand this relationship although this must be subjected to further research.

At present, the claim that the quality of the attachment style determines an individual's mentalising ability is confirmed in a longitudinal study in which securely-attached children were found to have superior mentalising capacity, but no better cognitive abilities at age five (Meins, Fernyhough, Russell & Clark-Carter, 1998; Symons & Clark, 2000), suggesting that there is something specific about attachment and mentalising per se. In addition, the evidence that links attachment to reflective functioning skills and the latter to ED/SH was discussed in the literature section. In particular, this evidence seems to be inextricably intertwined with several related concepts amongst which the concept of theory of mind (both c-ToM and e-ToM), alexithymia and emotion-recognition and it seems unfeasible to separate them. The evidence that links attachment and ToM, ToM to ED and attachment trauma to mentalising-failure (Fonagy, 1989; Leuzinger-Bohlerber et al., 2010) has already been discussed in the above sections and will not be repeated here. In addition to the above-mentioned studies that confirm a link between attachment, mentalising and ED symptomatology in adults, a recent child/adolescent review also found some evidence of an association between mentalising difficulties and ED symptomatology in children/adolescents (Jewell et al., 2016).

It can be argued that the targeted population in this latest review does not lend itself well to measuring mentalising and, to some extent, attachment capacities. In fact, whereas childhood is a time in which mentalising is still in development, hence not amenable to a thorough exploration of its full capacities, adolescence is a time of constant and often intense changes. Jewell et al. (2016) themselves argue that both attachment and mentalising are in flux during adolescence, which makes interpreting the results complicated. Nevertheless, whilst these findings ought to be treated with caution, they are worth bearing in mind. For example, Cate, K hademi, Judd and Miller (2013) investigated the relationship between attachment, mentalising and ED in a sample of young girls and concluded that there is a significant positive relationship between attachment and mentalising capacities. In addition, the authors discovered a significant negative relationship between mentalising capacities and eating disorder risk, hence arguably substantiating the literature discussed so far.

Further evidence in this respect comes from Rothschild-Yakar, Waniel and Stein (2013) who found that individuals with ED presented with a significantly lower level of symbolic representation and with more malevolent representations of their parents in comparison to controls. This indeed seems to provide evidence for the link between ED and a teleological stance as a lack of symbolic representation is likely to be associated with a concretisation of inner life and related symptoms. In addition, the authors also reported that a more benevolent parental representation, combined with better mentalising abilities, was found to indirectly predict lower eating disorder symptoms. Lastly, Schulte-Ruther, Mainz, Fink, Herpertz-Dahlmann and Konrad (2012) indicated that medial prefrontal cortex hypoactivation in a group of adolescents admitted to hospital with AN was correlated with poor clinical outcome at one-year follow-up. The medial prefrontal cortex is known to be a region of the brain that is activated during mentalising tasks.

Hence, the available evidence seems to endorse the thesis's proposed association between insecure attachment and mentalising deficits and the proposed association between mentalising difficulties and eating disordered symptomatology. At the same time, further research needs to be carried out before conclusions can be drawn as the generalisability of results from adolescent studies ought to be carefully considered given the changeable state of this developmental phase. As recently confirmed in a meta-analysis of the literature, insecure attachment in adolescence or adulthood cannot be taken as evidence of insecure attachment in infancy (Pinquart, Feussner & Ahnert, 2013). In addition, Gergely and Unoka (2008) argue that the notion that mentalising develops as a result of attachment needs to be treated with caution and suggest, instead, the idea of an innate, biological predisposition for the development of this function. The authors still highlight the utmost importance of the quality of the attachment for the child's future ability to make use of this ability.

Whereas Gergely and Unokaš (2008) claim seems to be refuted by a recent longitudinal twin study that suggested that mentalising is a developmental achievement, rather than a genetic factor (Hughes et al., 2005), further research ought to be carried out given that attention to such issues has only matured in the last couple of decades.

On the whole, these results suggest that mentalising is a very complex and multi-faceted concept that encompasses a variety of related concepts which cannot totally be separated from it and that might contribute, to some extent, to the complex relationship that the current thesis is trying to delineate. Furthermore, as already discussed, mentalising ability is not a static, or unitary skill or trait (Fonagy et al., 2012) but rather a dynamic skill which fluctuates and is particularly affected by stress and arousal, especially attachment-related stress (Allen et al., 2008). The 'switch-off point' in which mentalising failure happens is intrinsically subjective although Lule et al. (2014) warn that the ability to tolerate strong negative affects is an indicator for secure attachment. This prompts Jewell et al. (2016) to support the thesis' claim that individuals with insecure attachment are more likely to experience mentalising failures, especially in the context of attachment stress.

Ultimately, the above findings need to be gauged against a further drawback: a drawback which is proving poignant for the current thesis. The choice of available measures of mentalising in the above-mentioned projects meant that poorly validated measures of reflective function were a limitation (Jewell et al., 2016). This last point exemplifies the utmost need and value of consolidating not only a fully validated measure of mentalising, but also the utmost importance of consolidating the mentalising theory, to which the present appraisal will soon turn.

It can be argued that the ED literature might not necessarily be transferable to the understanding of the aetiology and factors involved in SH. Nevertheless, this claim can be countered by the two clinical presentations which share significant demographic and phenomenological characteristics (Cucchi et al., 2016; Favaro & Santonastaso, 2000) findings that confirm a significant comorbidity between the two symptoms. Currently, however, these claims are only speculative as the literature on mentalising and SH is complicated by the individuals who have been recruited for clinical trials who have presented with a diagnosis of BPD. This makes it impossible to draw on this literature although the available evidence suggests that mentalising-enhancing treatment approaches may be effective in reducing SH in adolescents (Rossouw & Fonagy, 2012).

To conclude, the reviewed literature suggests promising evidence as there seems to be some initial support for a relationship between attachment, mentalising and teleological symptoms as discussed by Fonagy et al. (2012). At the same time, this appraisal also indicates

the need for further research in order to elucidate this relationship. Hence, the possibility of mediating factors such as impulsivity (Perkins, 2009), affect regulation (Tasca & Balfour, 2014; Ty & Francis, 2013) and other risk factors such as depression and perfectionism and their relationship with mentalising and ED/SH ought to be investigated further. Ideally, these factors ought to be examined in prospective, longitudinal studies that use fully valid and robust measures of variables.

As Liljenfors and Lundh (2015) warn us, the theoretical framework that surrounds the development of mentalising is still developing and should not be expected as complete and free from inconsistencies. In particular, the authors reflect on the four proposed dimensions to mentalising (Fonagy et al., 2012) and argue that some points remain unclear to date.

One such point relates to the implicit versus explicit aspect of mentalising as discussed in the course of this thesis. Whereas from a developmental perspective the implicit/explicit distinction might make sense, in terms of cognitive processes this division might be more appropriate for the mentalising of others' cognitive processes, rather than to the child's mentalising of their own cognitive processes (Liljenfors & Lundh, 2015). In addition, whereas Fonagy et al. (2002) suggested that the infant moves from implicit to explicit mentalising of their own feelings by employing a process of 'social biofeedback' (Gergely & Watson, 1996' see page 65) that sees both the infant and the caregiver engaged in representational loops, there is no mention of whether there is also a switch between implicit and explicit mentalising of others' emotions (Liljenfors & Lundh, 2015).

The mentalising theory is silent on this point and although it can be argued that a 'switching point' might be when children start developing the ToM, many points remain unclear. For example, there are suggestions that the understanding of false-belief and the understanding of emotion may be distinct aspects of a child's development (Cutting & Dunn, 1999). In addition, in respect to the understanding of emotions, Fonagy's (2002) 'developmental theory of the self' argues that the infant's subjective sense of differential emotions develops through a consistent marked and contingent mirroring that allows the progression from primary to secondary order representations. Fonagy et al. (2002) rejects the idea that the infant has an awareness of the caregiver's and their own affect states. However, it is not clear how the infant can experience a sense of 'contingency' and 'markedness' if they do not have a perception and awareness of the caregiver's own affect (Liljenfors & Lundh, 2015).

Finally, it is contentious how the distinction between internal and external mentalising relates to cognitive processes. Whilst it is understandable that an individual might use external cues (i.e., facial expressions) to figure out someone else's internal emotional states, it is not clear how external cues could be used to decipher cognitions. Indeed, the mentalising of

cognitive processes lacks the bodily qualities that are instead characteristic of emotional states (Liljenfors & Lundh, 2015). Similarly, although the internal/external dimension might seem more appropriate to the mental states of others, internally focused mentalising might seem more relevant to one's own mental states, rather than that of others (Liljenfors & Lundh, 2015).

To conclude, over the past twenty years, the theoretical notion of a 'developmental theory of the self' and mentalising have expanded and come to the forefront of psychoanalytic theory and practice. At the same time, tracing the development and current status of the concept of mentalising entails interdisciplinary thinking as this notion combines ideas from several disciplines. For example, mentalising theory invites contributions from neuroscientific research about the brain and the link between the brain and mind. It also draws and calls on attachment theory and research about the quality of early (and potentially later therapeutic) relationships that arguably promote, or hinder, the capacity for mentalising. Lastly, it focuses and borrows from the theory of mind. Hence, while it can be argued that mentalising theory provides a unique arena for fertile, mutually enriching collaboration between several disciplines (Berger, 2008), it has also been argued that as a construct mentalising encompasses phenomena too varied to be useful theoretically (Allen & Fonagy, 2006).

Indeed, its theoretical underpinnings also need further clarification as some parts of the theory view mentalising-failure as the result of a developmental impairment caused by a lack of an appropriate mirroring, whereas other parts of the theory borrow from the psychodynamic literature in more strategic and active ways, and suggest that mentalising-failure might be the result of a defense mechanism (Choi-Kain & Gunderson, 2008). The relationship between these more passive deficits and the more active unconscious strategies that view mentalising-failure as a self-protective way to avoid considering the malicious intents of an abusive or neglectful figure and whether those opposite processes might affect mentalising in different ways has, to date, not been addressed.

Importance of the current study. The findings from this research have the potential to impact upon several areas. Among those, a number of theoretical issues such as whether mentalising might be a core difficulty in ED and, more specifically, in ED and SH, whether impaired reflective function can explain the specific relationship between ED and SH, and whether a stronger need to control the body, displayed by resorting to both ED and SH symptomatology, is linked to lower mentalising capacity. At the same time, however, this study has the potential to be relevant to clinical practice. This is a crucial and distinctive feature of Doctorate theses which arguably differentiate themselves from other PhD projects on the basis of their applicability to the 'real' world (Kasket, 2012). In this regard, a number of issues come to mind.

First of all, the results from this thesis could be relevant to ongoing discussions around the available interventions in the NHS that routinely target ED and/or SH separately. Currently available interventions include psychodynamic approaches, Cognitive Behavioural Therapy- CBT (Beck & Beck, 1995), Cognitive Analytic Therapy- CAT (Ryle, 1990), Dialectical Behavioural Therapy (DBT) (Linehan, 1993a), but also less popular enterprises recently devised to specifically target the lack of psychotherapeutic approaches that focus on ED and SH concurrently. The latter comprise Integrative Cognitive Therapy (ICT; Wonderlich et al., 2002) and the Self Regulatory Approach (SRA; Levitt et al., 2004). Despite varied philosophical underpinnings and arguably different focus of therapy, all of the above-mentioned approaches take for granted individuals' capacity to access and reflect upon their mental-states. In addition, all of the above approaches seem to prioritise stopping the enactments, rather than a focus on the embodied mind as advocated in newer enterprises that specifically advocate the rehabilitation of mentalising (Bateman & Fonagy, 2004, 2007, 2012; Fonagy et al., n.d; Skarderud, 2007).

Concerning this, the results from the current study could inform clinicians about the recommended focus of therapy and the advisable therapeutic stance. Furthermore, given the literature on the inter-personal nature of ED and SH difficulties and the bulk of empirical evidence on the role of significant others for the long-term recovery of ED and SH (Adrian, Zeman, Erdley, Lisa & Sim, 2011; Carr, 2014; Cottrell & Boston, 2002; Leff & Vaughn, 1985), it can be argued that the findings from the present study might also be relevant to newer psychotherapeutic developments that combine elements of mentalising theory and systemic principles (Dallos & Draper, 2005) trans-diagnostically. These psychotherapeutic developments include the more formal Mentalization based therapy for families MBT-F (A sen & Fonagy, 2011; Fonagy et al., n.d) that combines intra-personal and inter-personal elements by adopting an essentially systemic stance and viewing this through a mentalising lens (A sen & Fonagy, 2011). They also include mentalising-based interventions for children, young people and their families (Midgley & Vrouva, 2012) but also MBT's 'not-knowing stance' (Anderson & Goolishian, 1992) and other suggestions that encourage a more systemic outlook in respect to pertinent issues when working with individuals presenting with ED (Boscolo & Bertrando, 2002).

Ultimately, should the present study reveal a specific relationship between ED, SH and mentalising, this might suggest the need to address the lack of unified assessment tools for concurrent ED and SH. This last point has more recently prompted some researchers to devise the Self-Injury Self-Report Inventory (SISRI; Levitt et al., 2004) in order to encourage and augment a bio-psycho-social (Engel, 1980) assessment of concurrent ED and SH symptomatology.

Relevance to Counselling Psychology. The current research finds support in recent studies from the field of Counselling Psychology. Those have confirmed an association between SH and alexithymia (Polk & Liss, 2007, 2009), to the extent that scores on alexithymia were able to predict self-harmers (Borril et al., 2009). It is argued that, as counselling psychologists, we have just begun to understand the context of individuals who engage in SH and that much needs to be done on elaborating theories better understanding the immediate context that surrounds the individual when they are imminently self-destructive (Silverman, 2000, p. 547). The present study aims to add to that understanding by exploring new hypotheses. Similarly, following relative silence around ED in the field of counselling psychology, *The Counseling Psychologist* (2001, vol. 5) published a special issue on the subject and concluded that a working knowledge of ED is paramount for all counselling psychologists (Kashubeck-West & Mintz, 2001). Kashubeck-West and Mintz (2001) emphasised the cultural roots of ED and suggested that the study of ED integrates science and practice. This is consistent with counselling psychology's attention to cultural meaning and its commitment to a scientist-practitioner model (Kashubeck-West & Mintz, 2001).

Furthermore, counselling psychology emphasises the importance of genuineness and congruence (Rogers, 1951) both for the client's well-being, but also for the therapeutic alliance. Indeed, genuineness and congruence to one's own emotions can only be reached if both the client and the therapist are aware of their own mental/emotional states. It is arguable that a focus on mentalising and related-concepts in therapy would foster the development of a greater awareness of one's mental states, therefore, promoting genuineness. This, in turn, would nurture a stronger therapeutic relationship.

An Original/distinctive contribution to the discipline. The aim of this study, determining the role and the extent of mentalising-differences in individuals presenting with ED with/without concurrent SH, has important clinical implications for counselling psychology. Primarily, it responds to specific demands from the field of counselling psychology for the development of better screening and diagnostic tools, as well as therapeutic interventions, to identify and intervene with individuals at potential risk for the expression of self-destructive behaviours (Silverman, 2000). This, in turn, would allow clinicians to develop specific treatment approaches for groups with different levels of mentalising ability. Lastly, it would demonstrate the need for further, methodologically diverse research in this area.

In terms of practice, establishing mentalising capacity in individuals presenting with or without concurrent ED and SH aims to determine whether treatment should focus, as Skarderud (2007) claimed, on the rehabilitation of mentalising capacity. Indeed, current treatments such as

those described above, despite offering important contributions, fail to take into consideration the pre-mentalistic states of mind characteristic of this population. A focus on mentalising-function would translate in a particular attention to current mental states, on helping clients identify feelings, thoughts and impulses and on accurately representing and conveying a discrepancy between the client and therapist's internal representations, rather than on specific therapeutic techniques. Indeed, counselling psychology emphasises the prime importance of the therapeutic relationship and of empathy, considered to promote change irrespective of techniques (Gilbert & Leahy, 2007). Lastly, it is argued that counselling psychologists are uniquely devoted to the application of preventive interventions within a conceptual framework of growth and development (Silverman & Felner, 1995b). Hence, building on the gap in the literature and identifying core processes underlying ED and SH seems to be a distinctive contribution to the discipline due to being a key-feature to devise effective preventive therapeutic interventions.

Conclusions. The literature over the past few decades has documented a significant increase of psycho-somatic difficulties such as ED and SH. This has been accompanied by a growing body of evidence that suggests that such difficulties represent a particular challenge for baffled professionals who struggle to understand why someone would target one's own body. At the same time, research seems to have reported a specific link between ED and SH with individuals appearing to display specific difficulties in identifying, describing emotions and interpreting people's behaviours according to such mental states. These difficulties seem to respond little to traditional psychotherapy and they seem to arise specifically when the attachment system is activated. The latter factor is a crucial one and is mirrored in the intensity of the therapeutic alliance. Hence, more specific claims have recently been advanced, suggesting that these affect-related difficulties might hinder the level of engagement in therapy if not properly addressed.

Given that there is evidence to suggest that individuals who present with ED and concurrent SH show more severe and treatment-resistant psychopathology and that the relationship between ED and SH is still obscure, the current study aims to address whether a recently discovered concept, namely mentalising, might contribute to some of these difficulties. Shedding light on this aims to increase clinicians' knowledge about this client group, to improve our understanding of the role of emotions in concurrent ED and SH, and to encourage further research. This will hopefully help to enhance specific treatment protocols. In addition to these indirect wishes, the main research aim is to develop a better understanding of the difference in mentalising capacity in individuals presenting with ED with/without concurrent SH. The researcher will do this by exploring dissimilarities in mentalising ability in different groups (ED_SH and ED_noSH) that have been contrasted on the basis of their supposedly different

mentalising abilities. A control group has also been included to give an indication of mentalising in the general population.

However, given the ongoing research on the validation of the RFQ, the researcher will also initially report on the construct validity of the RFQ-54 (part one) before exploring these group differences using the newer version of the RFQ, the RFQ-c/u (part two). Eventually, measures of mentalising ability will be correlated to established measures of allied concepts to mentalising in order to test construct validity (part three).

Method

As mentioned on page 12, at the beginning of this research project the validation of the RFQ was ongoing. Hence, I initially administered the RFQ-54, a collection of items that were in development, to a group of participants who presented with ED difficulties with and without SH. However, in 2015, the RFQ scale was re-defined and I was able to retrospectively re-analyse the data according to the new subscales.

Conceptual theoretical and epistemological framework.

The choice of a quantitative analysis suggests a positivist theoretical and epistemological position. The current study borrows from the positivist approach a scientific, empirical, evidence-based, deductive method, which strives to be nomothetic. A positivist approach endorses science as the tool to explore `reality_ and it highlights the necessity for research to be bias-free; it sanctions the use of inductive reasoning to postulate theories that can be tested and, when fallible, corrected.

As a Counselling Psychologist in training, I am committed to place greatest emphasis on individuals` experiences and cultural meanings and I am committed to avoid the temptation of trying to `fit_ people into models. Nevertheless, I am also aware of counselling psychology`s commitment to a scientist-practitioner framework which strives to bridge the gap between the scientific method and its clinical applicability. Being able to provide practitioners with adequate data to corroborate whether individuals who present with ED and concurrent SH have less mentalising capacity is a priority in determining whether current treatments are effective. This, congruent to Counselling Psychology`s endeavour and bearing in mind issues of ecological validity of controlled clinical trials, would allow clinicians to attend to the welfare of the persona. My standpoint is to respect science and the scientific method, despite their limitations, as avenues to explore people`s internal world and to attempt to use the empirical method within counselling psychology`s frame of thinking.

Design.

The design was quasi-experimental, cross-sectional questionnaire-based: a measure of mentalising (RFQ scale) was compared in individuals presenting with ED and SH (ED_SH), individuals presenting with ED without SH (ED_noSH) and a control group. The quasi-experimental independent variable (IV) was group-type (ED_SH; ED_noSH; control group) and the dependent variables (DV) were reflective function, theory of mind, empathy, mindfulness and alexithymia. The primary interest was in reflective function, with the remaining DVs providing validation and context to this new variable.

Sample size, participants and setting.

Power calculations. A G* power a priori analysis 3.12.10 (Faul, Erdfelder, Lang, & Buchner, 2007) indicated that a minimum of 207 participants were needed if a medium effect size ($f = .25$) was expected. This is the total sample size required for 90% power when using an ANOVA to test three groups. After exclusion criteria were applied the final sample to be analysed contained 229 individuals.

Participants. The sampling was purposive. Inclusion criteria were: ED symptomatology, engage in SH, age between 16-65, English-speaker. Exclusion criteria were: individuals under 18, individuals highly distressed/suicidal, in-patients, presence of cognitive impairments/psychotic illnesses. The non-clinical control group was recruited through word of mouth, online advertisement and social networks; 116 people started the questionnaire but only 83 people completed it. Exclusion criteria for this group were the presence of current psychological difficulties and those under 18 years of age. Out of the ED group, a total of 186 individuals started the online survey; 115 completed it. An additional 55 people were recruited through the NHS. This brought the number of the ED group with/without concurrent SH to 170. After further exclusion of participants owing to missing data (see results section below), the numbers in each group were Control: 74 (48 female), ED with SH 58 (40 female) and ED without SH 97 (80 female).

It was planned to share the data with Prof. Fonagy for him to include in a wider study to assess the psychometric properties of the Reflective Function Questionnaire RFQ-54⁶.

Setting. Recruitment initially took place through a specialist NHS Eating Disorder Service and with the collaboration of two professionals who worked privately. The ED unit accepts referrals for anyone above the age of sixteen years old who presents with a primary

⁶ The data was shared with Prof. Fonagy on 30/01/15. No further communication has been received.

diagnosis of an ED. In addition, recruitment also took place online through UK and USA associations offering support and information to people with ED.

Measures.

Demographic details. Self-reported details were collected for each participant on gender, age, relationship status, ethnicity, employment status, level of education and occupation using a bespoke questionnaire. The reader is referred to Table 4 in the Results section (p. 107) for demographic details.

Questionnaires. The researcher administered the following questionnaires: Reflective Function Questionnaire (Fonagy & Ghinai, personal communication), SCOFF (Morgan, Reid, & Lacey, 1999), the Empathy: Perspective-Taking Subscale (PTS) of the Interpersonal Reactivity Index (Davis, 1983), Kentucky Inventory of Mindfulness Scale (KIMS; Baer, Smith, & Allen, 2004), Toronto Alexithymia Scale (TAS-20; Bagby, Parker, & Taylor, 1994) and Reading the Mind in the Eyes (RMET; Baron-Cohen et al., 2001). Since the study specifically looked at differences in mentalisation between participants who SH and those who do not, a single question to that effect was added to page 5 of the questionnaire, 'During the past week have you deliberately hurt yourself without meaning to kill yourself (e.g., cut yourself, burned yourself, punched yourself, put your hand through windows, punched walls, banged your head?). The above questionnaires, together with demographic questions, were compiled together in a unique document (Appendix 1).

Reflective Function Questionnaire (RFQ). The history of the development of the RFQ is as follows. Initial developments of the RFQ led to 101 questions on a 6 point Likert scale. Some items were polarised (i.e. 1 or 7 indicated high mentalising) and other items were median scored (i.e. 4 indicated high mentalising). Thirty-one items were subsequently rejected due to poor inter-rater reliability and 24 items were rejected for not meeting face and content validity. The 46 remaining items formed the initial version of the RFQ, of which the factor analysis found two factors representing 'internal-self' and 'internal-other' (Ha, Sharp, Ensink, Fonagy, & Cirino, 2013; Perkins, 2009). Available evidence on the RFQ-46 confirmed reasonably good internal reliability in a non-clinical population (Cronbach's $\alpha = 0.77$) and in a mixed sample of clinical/non-clinical individuals, amongst which ED (Perkins, 2009). Furthermore, the questionnaire was shown to relate positively to ToM, mindfulness and empathy, and to relate inversely to depression, multi-impulsivity, disordered eating, and borderline symptoms (Perkins, 2009).

Since the factor on 'internal-other' appeared a weaker factor in the RFQ-46 (Perkins, 2009), 8 more items were added relating to this dimension. This resulted in the version of the RFQ-54 as seen on pages 3, 4 and 5 of the questionnaire pack (see Appendix 1). The RFQ-54

consists of 2 main subscales on a 7 point Likert scale: the RFQ-A and the RFQ-B. The RFQ-A uses median scoring and has 32 items. The RFQ-B is made up of two subsidiary scales: HL and LH and uses polar scoring. The RFQ-B/HL comprises 8 reversed score/polarised items (1=highest score), whereas the RFQ-B/LH has 14 normally polarised items (7=highest score). Initial data screening and factor analysis on the RFQ-54 suggested a reduced scale of 18 items (RFQ18) that loaded onto the subscales: :Self~ (Cronbach's $\alpha = 0.75$) and :Other~ (Cronbach's $\alpha = 0.76$) (Moulton-Perkins & Rogoff, 2011). However, this has since been superseded (see below).

Findings suggested that the RFQ has good construct validity in that it relates positively to empathy and mindfulness, and relates negatively to alexithymia, BPD psychopathology, general psychopathology and ED psychopathology (Moulton-Perkins & Rogoff, 2011; Perkins, 2009; Rogoff, 2011; Wilshere, 2011) as measured on the SCOFF (Morgan, Reid & Lacey, 1999). It also has strong overall internal reliability (Cronbach's $\alpha = 0.82$; Moulton-Perkins & Rogoff, 2011).

In 2015, following ongoing work on the psychometric qualities of the RFQ, new advances led to the development of a shorter 12 item scale. The new version of the RFQ (Fonagy et al., 2016) measures the level of certainty (RFQc) and uncertainty (RFQu) about mental states; both subscales consist of 6 items. The Certainty scale picks up on people who clearly disagree with the first six items. On the other hand, the Uncertainty scale picks up on people who clearly agree with the first four items, and item 27 but disagree with item 8. All items are rated by participants on a 7-point Likert type scale, ranging from completely disagree to completely agree. The scales are then recoded using a non-linear scoring to identify participants who give strongly polarised responses. The table shows how this is achieved. It can be seen from the table how four items contributed to both scales by focussing on either extreme high or extreme low ratings.

Table 1
Recoding of RFQc/u

#	Item	Coding for RFQc	Coding for RFQu
17	I don't always know why I do what I do	1=3, 2=2, 3=1; else = 0	7=3, 6=2, 5=1, else = 0
29	When I get angry I say things that I later regret	1=3, 2=2, 3=1; else = 0	7=3, 6=2, 5=1, else = 0
35	If I feel insecure I can behave in ways that put others' backs up	1=3, 2=2, 3=1; else = 0	7=3, 6=2, 5=1, else = 0
36	Sometimes I do things without really knowing why	1=3, 2=2, 3=1; else = 0	7=3, 6=2, 5=1, else = 0
1	People's thoughts are a mystery to me	1=3, 2=2, 3=1; else = 0	NOT USED
22	When I get angry I say things without really knowing why I am	1=3, 2=2, 3=1; else = 0	NOT USED
27	Strong feelings often cloud my thinking	NOT USED	7=3, 6=2, 5=1, else = 0
8	I always know what I feel.	NOT USED	7=3, 6=2, 5=1, else = 0

Eating Disorder. The SCOFF questionnaire is a 5-item yes/no test devised for use by non-specialists to detect the possible presence of an eating disorder when scores exceed the cut-off point of 2 yes and above. It was chosen because it is simple, easily-applied and scored. Furthermore, despite it being designed to suggest a likely case rather than a diagnosis, its statistical validity is sufficient for it to be used routinely in all individuals considered at risk (Morgan et al., 1999). Based on the reported false positive figures of 12.5% (Morgan et al., 1999), 14 out of the ED internet sample might have been wrongly included. This equates to only 8% of the total sample size, which seemed an acceptable trade off. In addition, a recent meta-analysis carried out to establish the diagnostic accuracy of the SCOFF concluded that the use of the measure is highly recommended for screening purposes (Botella, Sepúlveda, Huang & Gambara, 2013).

Empathy. The Interpersonal Reactivity Index (Davis, 1983), a multidimensional measure of empathy, was chosen because it was hypothesised that one of its sub-scales, namely the 7-item Perspective Taking Subscale (PTS), would correlate well with the RFQ. The PTS measures cognitive aspects of empathy; in particular, the reported tendency to spontaneously adopt the psychological viewpoint of others. It was speculated that someone with good mentalising of others would score highly on perspective-taking. The PTS uses a 5-point Likert scale with two anchor-points and it comprises 2 reversed score/polarised items (1=highest score) and 5 normally polarised items (7=highest score). It has shown good construct, predictive criterion and divergent construct validity (Davis, 1983). Its internal reliability has been reported as Cronbach's $\alpha = .83$ (Rogoff, 2011).

Mindfulness. The KIMS questionnaire was chosen because of its greater flexibility compared to other measures and because it has subscales that more closely approximate to reflective function. In addition, both this measure and the PTS were chosen because of their focus on the relevant concepts as conceptualized by a few features, rather than as one global concept. The KIMS measures moment-to-moment mindfulness experience and it targets 4 aspects of mindfulness: observing, describing, acting with awareness and accepting without judgement. The questionnaire shows good construct, convergent and divergent validity (Baer et al., 2004) and very good internal reliability (Rogoff, 2011).

For the purpose of this research, two subscales were used in order to capture those aspects of mindfulness that appear to be more closely related to mentalising: describing and acting with awareness. These subscales consisted of 18 statements (9 reversed score/polarised items and 9 normally polarised items) on a 5-point Likert scale with a maximum score of 90. Research reported good internal consistency for the subscales (Cronbach's $\alpha = .84$ and Cronbach's $\alpha = .83$ respectively; Baer et al., 2004).

Alexithymia. Being one of the most widely used measure of alexithymia, the TAS-20 (Bagby, Parker, & Taylor, 1994) measures alexithymia in 3 factors including difficulty identifying feelings and distinguishing them from bodily sensations, difficulty describing feelings and externally-oriented thinking. The scale comprises of 20 items, 5 of which reversed, which are scored using a 5-point Likert scale. The total alexithymia score is the sum of all the 20 items. The TAS-20 uses cut-off scoring: equal to or less than 51 = non-alexithymia, equal to or greater than 61 = alexithymia. Scores of 52 to 60 = possible alexithymia. Research suggests that the scale has good internal consistency, test-retest reliability and construct validity. Rogoff (2001) reported that its internal reliability is Cronbach's $\alpha = .90$.

Theory of mind. The choice to use the RMET (Baron-Cohen et al., 2001) test was dictated by the measure, originally devised to assess theory of mind in people with autism, having recently been used to successfully differentiate mentalising skills in BPD (Frick et al., 2013). The test has 36 items and participants are asked to interpret 36 photographs of the eye region of faces by choosing from four words describing emotional states. The test is scored by summing all the correct answers; the average score is in the range of 22 to 30 correct responses. If a person scores below 22, they may struggle to understand a person's mental state based on their appearance. Vellante et al. (2012) reported a Cronbach alpha of .605. However, Fernández-Basual, Cabello, Fernández-Berrocal and Baron-Cohen (2013) acknowledged that the RMET test, like tests explicitly designed to test emotion recognition, has psychometric properties that

prevent straightforward calculation of Cronbach's alpha. Hence many studies that employ the RMET do not include Cronbach's alpha (Fernández-Abascal et al., 2013).

Potential confounding variables. Given that some researchers suggested that good psychotherapy is mentalising at its best (Allen et al., 2008), and that good psychotherapy nurtures the latter (Stedmon & Dallos, 2009), it seems important to take into consideration the possible impact that psychotherapy might have on RF. Muller, Kanhold, Overbeck and Grabhorn (2006) reported a significant correlation between mentalising and improvement in mental health condition, a finding that was partially replicated by Tabner, White, Zimmermann, Fonagy and Nolte (2011). In addition, a recent study reported a significant difference in mentalising ability in therapists who as a result of training requirements undergo ongoing therapy versus a control group (Rogoff, 2011). Hence, it seems feasible to believe that being in personal therapy may affect a person's ability to mentalise, although several studies suggest that this also depends on the psychotherapeutic model used (Katznelson, 2014).

Research suggested that in order for psychotherapy to be mentalising-enhancing it has to be of a certain length, psychodynamically oriented and focused on specifically enhancing insight and on specifically integrating split off mental states (Katznelson, 2014). As a result, participants on the current study were asked to state whether they had any previous experience of psychological therapy and if so, for how long.

Procedures.

Recruitment through the NHS. Information on the study (see Appendix 2) was sent out in written format alongside the appointment-time, so that participants could make an informed choice about whether to participate. Individuals who opted to partake in the study were subsequently given the questionnaire (Appendix 1), a consent form (Appendix 3), a list of support numbers (Appendix 4) and a self addressed envelope during their appointment at the clinic. The cooperation of clinicians was crucial to allow the researcher to select participants according to the criteria set by the study. In addition, the consultant's clinical judgment ensured that individuals who presented with severe risk issues were not approached for the study.

Private practice. Contact had been made with two professionals who worked privately with individuals presenting with ED. At appointments, clients were given the information pack and asked whether they wished to participate. If they wished, the same procedure as above applied.

Recruitment through ED Associations and online. The ED administrator e-mailed the information sheet to individuals who had registered with the charities as being willing to

volunteer for research studies. Volunteers could either request a questionnaire pack or they could complete the questionnaire online.

An online version of the survey was set up on Qualtrics⁷. The research was advertised on the ED associations website and, when applicable, a flyer was posted on charities' Facebook pages (social network website) (Appendix 5). When participants were recruited online, it was not feasible to screen for level of distress and/or suicidality. However, an online recommendation featured the following message: "The following questionnaire covers topics which some people might find upsetting. If you are feeling very vulnerable, or have thoughts of hurting yourself, we recommend that you contact your GP or emergency services. Please DO take care and wait until you feel better before filling in this questionnaire. By filling in the questionnaire you consent to your data being used for research purposes. A list of support organisations was supplied.

Table 2:

Eating disorder's group: Participants' recruitment breakdown according to settings (before exclusion criteria applied)

	NHS ED clinic	Private clinicians	ED associations-online recruitment
Number	55	6	168

Table 3:

Eating disorder's group: Participants' recruitment breakdown according to settings (following exclusion criteria applied)

	NHS ED clinic	Private clinicians	ED associations-online recruitment
Number	55	6	94

⁷ Qualtrics is a private research software which enables users to collect online data.

Ethical Considerations. The role of a counselling psychologist is to adopt a scientist-practitioner approach. This is particularly true when considering ethical issues for research. On the one hand, the researcher must be extremely sensitive to the well-being of the participants; on the other, she needs to be aware that research might increase knowledge and, hence, improve therapeutic care. Both these aspects have been taken into consideration when planning this study. In particular, the researcher adhered to the Beauchamp and Childress (2001) ethical framework for dealing with individuals presenting with ED. Central to this framework are beneficence and non-maleficence. The former involves ensuring the safety of the individual and the latter the avoidance of harm. These have been addressed by balancing the need for knowledge, which might lead to the development of new therapeutic enterprises, with attention to the prevention of adverse consequences that might arise as a result of taking part in the research.

The current research only included participants over 18 years of age. Potential participants were informed of the nature and goals of this research beforehand (Appendix 2). Attention was given to ensure that informed consent was given, either by filling in the consent form (Appendix 3) or by putting a notice on the online version emphasising that consent was implied from filling in the questionnaire. Participants were reminded of their right to withdraw at any stage of the process and were advised to raise any issues with the researcher or the associated clinician, when applicable. Anonymised data is kept on a password-protected electronic database and will be destroyed after use; signed consent forms are kept separately in a locked compartment.

Due to the nature of the topics to be examined and the vulnerability of the population in question, very vulnerable people, individuals under 18, those highly distressed/suicidal and in-patients were not approached. Nevertheless, it was important to bear in mind the possibility that participants might become distressed or, indeed, tired as a result of filling in the questionnaire. Initial piloting of the questionnaires with fellow students and non service-users, revealed that it took 20 minutes to complete. It was felt, therefore, that allowing 30 minutes to service-users was sufficient, and would not create an undue burden on participants. Furthermore, the information pack and the questionnaire were also given to a service user who routinely works with renowned clinicians on ED/BPD research matters. Feedback on wording, format and length was received. In addition, a list of help-lines was provided to participants (Appendix 4).

As already mentioned on page 12, the proposed research was included in Prof. Fonagy and Dr. Alesia Perkins' ethical application form (Appendix 6). Nevertheless, the two studies were independent and the only point of contact was that the trainee researcher shared the results collected; hence, no conflict of interest was present. Ethical approval was obtained from the National Research Ethics Service (NRES; see Appendix 7) and individual organisations. Since

the original ethical approval expired in August 2012, a minor amendment notification was sent to the NRES to request an extension of study timelines (Appendix 8). In addition, the researcher obtained ethical approval from City University's Ethics Committee (Appendix 9).

Benefits of the study. By feeding back the results to individual associations at the end of the study, and hearing about how this research could contribute to better understanding and future treatment for individuals presenting with ED with/without concurrent SH, participants may experience some indirect benefit. The process might encourage some participants to become more active agents in their own recovery and this might foster a sense of satisfaction and achievement that they have contributed to this process.

Research hypotheses.

Part 1: Comparing 3 groups on mentalising ability on the RFQ-54.

1. H_I There will be significant differences in mentalising ability between individuals who present with ED_no self-harm, individuals who present with ED and concurrent SH and a control group.
2. H_{II} Individuals who present with ED with, or without SH will display lower levels of mentalising ability compared to the non-clinical control group.
3. H_{III} Individuals who present with comorbid ED and SH will display lower levels of mentalising ability than individuals with ED and no concurrent SH.

Part 2: Comparing 3 groups on mentalising ability on the RFQc/u.

4. H_{IV} There will be significant differences in mentalising ability between individuals who present with ED_no self-harm, individuals who present with ED and concurrent SH and a control group.
5. H_V Individuals who present with ED with or without SH will display lower levels of mentalising ability compared to the non-clinical control group.
6. H_{VI} Individuals who present with comorbid ED and SH will display lower levels of mentalising ability than individuals with ED and no concurrent SH.

Part 3: Exploring the relationship between mentalising ability and other scales and measures of related constructs within the whole sample.

7. H_{VII} There is a positive correlation between mentalising and mindfulness.

8. H_{III} There is a positive correlation between mentalising and empathy.
9. H_{IX} There is a positive correlation between mentalising and ToM.
10. H_X There is a negative correlation between mentalising and alexithymia.

Statistical analysis. The data were analysed using SPSS Statistics for Windows, release version 21.0 (SPSS IBM, 2012).

Data was screened for anomalous entries, consistency with inclusion/exclusion criteria and missing values. After a thorough review of the control group data, 2 participants were excluded from the analysis due to a positive answer on the SH question. A further 7 participants were excluded due to scores on the SCOFF (<2). This brought the total number of the control group from 83 to 74. Out of the 170 participants in the mixed sample group (ED no_SH and ED_SH), 15 did not meet the SCOFF baseline, hence they were excluded from the analysis. Out of those there were 4 with comorbid SH and 11 with ED no SH. This brought the total number from 170 to 155, of which 97 with ED no SH and 58 with ED and concurrent SH.

The database was further screened. Where more than 5% of the data on a particular scale were missing, the participant's data were excluded from analyses involving that scale; where less than 5% missing, the missing values were replaced with the sample mean score for that item. Assumptions of normality and linearity were tested for all major variables and each case was examined by calculating and inspecting z-scores. Furthermore, in order to check the normality of the distribution within each group, z-scores for skewness and kurtosis were also calculated by dividing the skewness/kurtosis value by their standard errors. In group samples with a number of participants inferior to 100, Z-scores with a value greater than 1.96 were assumed to be non-normally distributed. In samples with a number of participants between 100 and 300 this number was raised to 3.29 (Field, 2005; Fife-Shaw, 2011).

Outliers were examined by calculating and inspecting z-scores for each case with regard to group mean and standard deviation. It was decided to deal with extreme cases by changing the extreme score to the mean +/- two times the standard deviation (Field, 2005).

An a priori assumption was that length of therapy would be correlated to mentalising. Upon inspection, this variable was heavily positively skewed, hence it was decided to log transform it before assessing the relationship between the 2 above-mentioned variables. In addition, correlations between the RFQ and the other demographic variables were also explored using non-parametric tests. This was done with the aim of identifying potential covariates, as per Tabachnick and Fidell (2007). The authors suggest that assessing correlations with

dependent variables is a suitable method to identify covariates when performing analysis of variance. At the same time, any variable that was found to be significantly different between groups was excluded as a potential covariate in (M)ANCOVA (Field, 2005).

Group differences in terms of demographic variables were explored using several methods. For example, Chi-square tests were used for categorical variables (e.g. gender), whereas non-parametric tests (e.g., Kruskal-Wallis and Wilcoxon) were employed for ordinal data (i.e., Educational Attainment) or data non-normally distributed within groups (i.e., age).

Part One: Comparing 3 groups on mentalising ability on the RFQ-54. In order to explore the research aim, it was first necessary to assess the internal reliability and the construct validity of the RFQ-54. Hence, a Cronbach's alpha was computed and Maximum Likelihood Factor Analysis (MLFA) was carried out. Subsequently, 3 MANOVAs were run comparing the 3 groups first, the two ED groups to the control and the ED_SH to the ED_noSH group. The decision to run a MANOVA, rather than a MANCOVA was made taking in consideration the literature that discusses the appropriateness of controlling for covariates (Field, 2005; Miller & Chapman, 2001).

Based on the demographic findings, it initially seemed appropriate to control for age and educational attainment. However, research of the literature revealed that 'the only legitimate use of covariance is for reducing the variability of scores in groups that vary randomly' (Miller & Chapman, 2001, p. 43). In this respect, it can be argued that age and educational attainment did not differ across groups randomly, but rather are a difference inherently connected to the group of belonging. This point prompted a more informed decision to run a MANOVA instead.

Part Two: Exploring mentalising differences in the three groups using the RFQc/u. As discussed above, the structure of the RFQc/u was initially investigated using a Maximum Likelihood Factor Analysis (MLFA). Differences in mentalising ability between the 3 groups were investigated using 3 MANOVAs as described above. In addition, the MANOVAs were followed up by a discriminant analysis.

Part Three: Exploring relationships between mentalising and related concepts. The relationship between mentalising and related concepts was explored using correlations. In order to have a more robust measure (i.e., less prone to be influenced by outliers) Spearman's r non-parametric correlations were employed.

Results

As discussed in the statement on page 12, the RFQ has undergone a series of changes over the past few years in order to optimise its psychometric qualities. The current section reflects these alterations. For example, the current section will take the reader through the findings of the current study starting from data cleaning. The first three parts of the results report the analysis of the data examining the reliability and factor structure of the RFQ-54 and comparing groups on mentalising abilities using the RFQ54 (Part 1). The last three parts of the results section (Part 2) will consider group differences according to the RFQc/u. As part of this section, the researcher will also explore whether the RFQc/u is able to discriminate SH. Lastly, the relationship between mentalising and allied concepts will be explored using the RFQc/u.

Data cleaning. Where a participant had more than 5% scores missing on any particular scale, they were excluded from analyses involving that scale. This applied to 5 and 13 participants respectively excluded from the ED_SH and ED_noSH groups in respect to the PTS; 4, 5 and 13 participants respectively excluded from the Control, ED_SH and ED_noSH groups in relation to the KIMS, and 4, 7, and 15 excluded from the Control, ED_SH and ED_noSH groups in relation to the TAS. Lastly, 4, 8 and 17 participants were respectively excluded from the Control, ED_SH and ED_noSH groups in relation to the REMT (Appendix 10).

In addition, where less than 5% of scores were missing, they were replaced by mean substitution (Appendix 10). Mean substitution followed Field's (2005) guidelines: the missing score was estimated by calculating the mean sample score for that particular item across the 3 groups. Based on this criterion, 3 and 6 participants in the ED_SH and ED_noSH respectively were subject to mean substitution in relation to the RFQ. Two participants in the ED_noSH in relation to the PTS, 1 and 2 respectively in the ED_SH and ED_noSH for the KIMS, 2 and 2 respectively for the control and the ED_SH group in regards to the TAS and 4, 2, and 3 respectively in the control, ED_SH and ED_noSH for the REMT.

Furthermore, inspection of scores revealed the presence of some outliers, which were dealt with by changing the extreme score to the mean +/- two times the standard deviation, as suggested by Field (2005). Three, 4 and 4 outliers were recoded for the ED_SH, the ED_noSH and the Control group respectively in respect to the RFQ-54; 1, 3 and 5 outliers were recoded for the ED_SH, the ED_noSH and the Control group respectively in respect to the PTS; 3, 1 and 5 outliers were recoded for the ED_SH, the ED_noSH and the Control group respectively in respect to the KIMS; 2 and 2 outliers were recoded for the ED_noSH and the Control group respectively in respect to the TAS and 3 outliers were recoded for the Control group in respect to the RMET.

In addition, exploration of z-scores for skewness and kurtosis (Appendix 11) indicated that some outcome variables were above the 1.96 criterion set to ascertain normality of distribution (Field, 2005; Fife-Shaw, 2011). However, after outliers re-coding, normality was checked again and all variables were found to be normal, except the KIMS in the ED_SH group that showed a skewness Z-score of 2.2 (Appendix 11). After careful consideration, it was decided to continue the analysis with parametric tests. It is generally agreed that t-tests and (M)ANOVAs are robust against mild violations of assumptions in many situations. As a result, some researchers in the literature have argued that parametric tests can be employed even when the data is not-normally distributed (Glass et al., 1972; Shinohara et al., 2012). The latter researchers confidently state that parametric model-based tests preserve nonparametric validity of testing the null hypothesis even when the models are incorrect and that they increase power compared to the non- or semi-parametric counterpart when the models are close to correct (Shinohara et al., 2012).

Before addressing the main research hypotheses, the demographic data for the groups was explored.

Table 4
Demographic details

Category	Sub category	ED_SH		ED_noSH		CG	
		Mean	SD	Mean	SD	Mean	SD
Age	(in years)	28.4	10.6	33.3	12.4	37.8	9.7
Gender	Female	40	69	80	82.5	48	64.9
	Male	18	31	17	17.5	26	35.1
Relationship status	In a long-term relationship	20	34.5	34	35.1	47	63.5
	Not in a long-term relationship	38	65.5	63	64.9	27	36.5
Ethnicity	White British	44	15.9	69	71.1	24	33.3
	Any other white background	6	10.3	2	2	26	36.1
	White mixed background	3	5.1	21	21.6	4	5.4
	Non-white background	5	8.6	1	1	18	23.6
Employment	Employed	22	37.9	46	47.4	45	60.8
	Self-employed	3	5.2	12	12.4	7	9.7
	Unemployed	16	27.6	11	11.3	5	6.9
	Studying	16	27.6	25	25.8	14	19.4
	Retired	0		1	1	3	4.2
	Homemaker	0		0		0	
Education	Secondary school to age 16	4	6.9	2	2.1	4	5.6
	Secondary school to age 18	19	32.8	24	24.7	11	15.3
	Non-degree vocational work based training	9	15.5	15.5	15.5	7	9.5
	University degree	15	29.9	36	37.1	21	27.8
	University postgraduate degree	8	13.8	16	16.5	20	28.4
	University doctoral level	2	3.4	4	4.1	11	15.3

Results showed significant group differences in terms of ethnicity ($\chi^2(6) = 43.73, p < .001$), gender ($\chi^2(2) = 7.43, p = .024$), age Kruskal Wallis ($H(2) = 27.40, p < .001$), educational attainment ($H(2) = 13.21, p = .001$), relationship status ($\chi^2(2) = 16.71, p < .001$) and length of therapy ($H(2) = 37.61, p < .001$). The clinical groups were more likely to describe themselves as White (95% and 91% against the 68% of the control group), to consist of more women and to be younger than the Control group. In terms of age, the group presenting with ED_SH comprised the youngest participants. The clinical groups were also significantly more likely to be in therapy ($H(2) = 37.61, p < .001$), to have lower educational attainment ($H(2) = 13.21, p = .001$), to be unemployed ($\chi^2(2) = 12.93, p = .002$) and they were less likely to be in a relationship ($\chi^2(2) = 16.71, p < .001$).

Findings suggested that only age and educational attainment significantly correlated with the RFQ-54 (Spearman's $\rho > .186$, $p < .02$; Spearman's $\rho = .27$, $p < .001$ respectively).

Part 1: Group comparison using the RFQ54

Reliabilities analysis. Internal reliabilities of scales were checked with Cronbach's alpha and were acceptable. Reliabilities were as follows: PTS = .87, KIMS = .80, TAS = .86, RMET = .55. The reliability of the RFQ54 was = 0.815 based on all the items. The reliability of the subscales was as follows: Subscale RFQ-A (Ih) = 0.866 based on 32 median scoring; subscale RFQ-B(hl) = 0.682 based on 8 reversed scoring items and subscale RFQ-B(Ih) = 0.711 based on 14 directly scored items (unchanged).

Construct validity. The construct validity of the RFQ-54 was assessed by conducting a Maximum Likelihood Factor Analysis (MLFA) on the whole sample and on each of the 3 groups. The choice to perform a Factor Analysis was dictated by the literature that shows that FA is more appropriate than Principal Components Analysis for confirmatory analysis of underlying scales (Costello & Osborne, 2005; Ferguson & Cox, 1993). A similar factor structure was obtained in each case; hence only the analysis of the whole group is reported.

Bartlett's test reached significance ($\chi^2(1431) = 3777.648$, $p < .001$) and Kaiser-Meyer-Olkin Measure of Sampling Adequacy reached a good value (0.74). Eighteen factors with Eigenvalues > 1 were initially extracted (Kaiser, 1960 as cited in Field, 2005). However, an exploration of the scree plot (below) indicated that 4 factors gave the most interpretable solution.

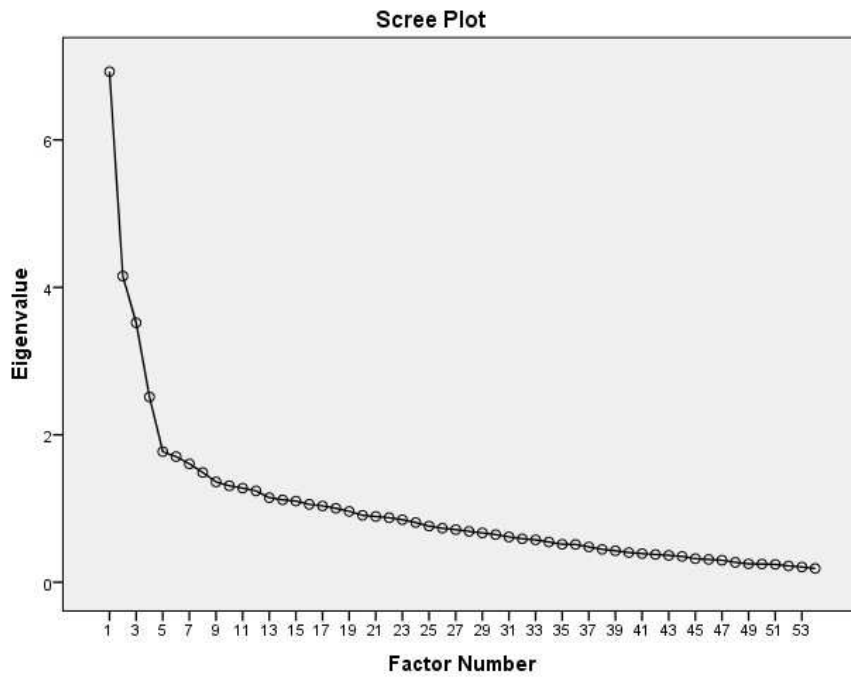


Figure 1: EFA scree plot for all groups

A Varimax rotation was performed in order to improve the interpretability of the results. For the unrotated solution, the first factor was robust, with an Eigenvalue of 6.92 and it accounted for 12.8% of the variance in the data. Factor 2 had an Eigenvalue 4.15 and explained a further 7.69% of the variance whereas the Eigenvalue for factor 3 was 3.52 and accounted for extra 3.52% of the total variance. Lastly, factor 4 had an Eigenvalue of 2.51 and justified 6.56% of the total variance. Together the factors accounted for 31.7% of the total variance.

Table 5
Exploratory Factor Analysis Rotated Factor Matrix

	Factor			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
RFQIhl34: I normally have a good idea of what is on someone's mind	.718			
RFQIhl47: My gut feeling about what someone else is thinking is usually very accurate	.664			
RFQIhl2: It is easy for me to figure out what someone else is thinking or feeling	.659			
RFQIhl18: It's really hard for me to figure out what goes on in other people's minds	.628			
RFQIhl27: I can mostly predict what someone else will do	.608			
RFQIhl30: My intuition about a person is hardly ever wrong	.606			
RFQIhl16: I don't always know why I do what I do		.608		
RFQIhl44: Sometimes I do things without really knowing why		.561		
RFQIhl20: When I get angry I say things without really knowing why I am saying them		.557		
RFQIhl12: I often get confused about what I am feeling		.549		
RFQIhl40: If I feel insecure I can behave in ways that put others' backs up		.499		
RFQIhl8: I always know what I feel		.471		
RFQhl41: I find it difficult to other peoples' point of view			.598	
RFQhl37: I get confused when people talk about their feelings			.581	
RFQhl32: Sometimes I find myself saying things and I have no idea why I said them			.574	
RFQhl23: I often have to force people to do what I want them to do			.501	
RFQhl24: Those close to me often find it difficult to understand why I things			.480	-.311
RFQhl39: I frequently feel that my mind is empty			.393	
RFQ31: I believe that people can see a situation very differently based on their own beliefs and experiences				.587
RFQ5: I pay attention to the impact of my actions on others' feelings			.504	.535
RFQ9: How I feel can easily affect how I understand someone else's behaviour				.485
RFQ17: I have noticed that people often give me advice to others that they actually wish to follow themselves				.458
RFQ48: Understanding the reasons for people's actions helps me to forgive them				.427
RFQ21: I'm often curious about the meaning behind others' actions				.421

Note. Items with hl after RFQ used median scoring. Items with hl were reverse scored, while items with plain numbers were directly scored

The table above shows the first 6 items of each component after rotation. Loadings with an absolute value below .3 have been omitted. Further exploration of the structure suggested that Factor 1 and Factor 2 mapped onto the RFQ-A scale, which required a midpoint score in order to denote high mentalising. Factor 3 mapped onto the RFQ-B(hl) and Factor 4 onto the RFQ-B(lh); the former requiring a reverse scoring and the latter a direct scoring in order to convey high mentalising. Given that the factors respectively loaded onto the RFQ-A and the 2 subscales of the RFQ-B, construct validity of the RFQ-54 scale can be inferred.

Hypotheses Testing

Part One: Comparing 3 groups on mentalising ability using the RFQ-54. A one way MANOVA was run with the 3 groups as the Independent Variable and the 3 subscales of the RFQ-54 as the Dependent Variables. This test sought evidence that the 3 groups differ on the 3 subscales. Table 2 shows descriptive statistics for the Dependent Variables. Subscales RFQ-A and RFQ-B(hl) produced a trend in the hypothesised direction with individuals presenting with ED and SH scoring lower than individuals with ED without SH, who in turn scored lower than control. Results from the RFQ-B(lh) showed individuals with ED_SH scoring highest, followed by the control group and the ED_noSH scoring lowest on the scale.

Table 6

Means and Standard Deviation for the RFQ54 subscales

	Group	Means	Standard deviation
RFQ-A	ED_no SH	127.29	24.10
	Control	135.18	24.98
	ED_SH	34.05	8.79
RFQ-B(hl)	ED_no SH	37.46	7.45
	Control	42.60	6.47
	ED_SH	72.22	10.56
RFQ-B(lh)	ED_no SH	70.61	10.05
	Control	71.62	9.89

The MANOVA revealed a significant multivariate main effect of groups, Pillai's $V = 0.209$, $F(6, 448) = 8.70$, $p < .001$, $\eta^2 = .104$. Having found that, two more MANOVAs were run in order to explore whether (a) ED groups differ from controls and (b) within the ED sample, do individuals who present with SH differ from those who present without SH? A one way MANOVA between ED (with/without SH) and the control group revealed a significant multivariate main effect of groups, Pillai's $V = 0.165$, $F(3, 224) = 14.80$, $p < .001$, $\eta^2 = .165$.

A one way MANOVA between ED_noSH and ED_SH also reported a significant multivariate main effect of groups, Pillai's $V = .062$, $F(3, 150) = 3.27$, $p < .05$, $\eta^2 = .062$.

All three of the MANOVA tests were statistically significant ($p < .001$ for the three groups and for the control versus the ED groups, $p < .05$ for the ED groups with/without self-harm). This indicates that the null hypothesis can be rejected in all cases. Univariate ANOVAs on the outcome variables revealed a significant effect for subscales RFQ-A and RFQ-B(hl) in all groups together, in the EDs versus control and in the RFQ-B(hl) of the ED_noSH versus ED_SH group.

Table 7
Univariate ANOVAs for the RFQ-54 subscales

	Group	F	Hypothesis df	Error df	Sig	Partial Eta Squared
RFQ-A	Three groups	5.26	2	225	$p < .05$.045
	EDs vs Control	7.86	1	226	$p < .05$.034
	ED+SH vs ED_no SH	2.47	1	152	$p > .05$.016
RFQ-B(hl)	Three groups	21.93	2	225	$p < .001$.163
	EDs vs Control	35.14	1	226	$p < .001$.135
	ED+SH vs ED_no SH	6.62	1	152	$p < .05$.042
RFQ-B(lh)	Three groups	.49	2	225	$p > .05$.004
	EDs vs Control	.078	1	226	$p > .05$.000
	ED+SH vs ED_no SH	.89	1	152	$p > .05$.006

The results show that the RFQ-A differentiated between the three groups overall, with individuals who present with ED showing lower scores on mentalising ability. The RFQ-A, however, did not differentiate those with or without SH. The trend was in the same direction, but there was greater variability in the ED_SH group, leading to no significant effect. In terms of the RFQ-B(hl), statistical tests showed an overall difference between the three groups and was significant for both of the planned contrasts. Individuals presenting with ED displayed lower mentalising abilities than controls, and within that group those with SH were lower than those without. The RFQ-B(lh) did not differentiate significantly between the three groups. To summarise, the RFQ54 showed good reliability and scale structure. There is evidence that it can also differentiate eating disorder and SH groups. Since it has been superseded with the RFQc/u it is to this that we now turn.

Part two: Group comparison using the RFQc/u version.

Part 1 analysed the data based on the original RFQ-54, with which the project began. In the next part, the data were analysed again using the RFQc/u. The reader is referred to the method section if they wish to remind themselves on how the RFQc/u was constructed.

Reliabilities analysis. Internal consistency was deemed satisfactory for both the RFQc (certainty) (Cronbach's alpha =.0.67) and the RFQu (uncertainty) subscale (Cronbach's alpha=.68).

Construct validity. The structure of the RFQc and RFQu scales was checked using Maximum Likelihood Factor Analysis (MLFA) with Varimax rotation (Costello & Osborne, 2005). As seen from the scree plot below the elbow indicated 2 factors, which is in line with the authors' reports (Fonagy et al 2016). The first factor had an Eigenvalue of 4.17 and accounted for 34.7% of the variance in the data. Factor 2 had an Eigenvalue of 1.81 and explained a further 15.11% of the variance. Together the factors accounted for 49.8% of the total variance.

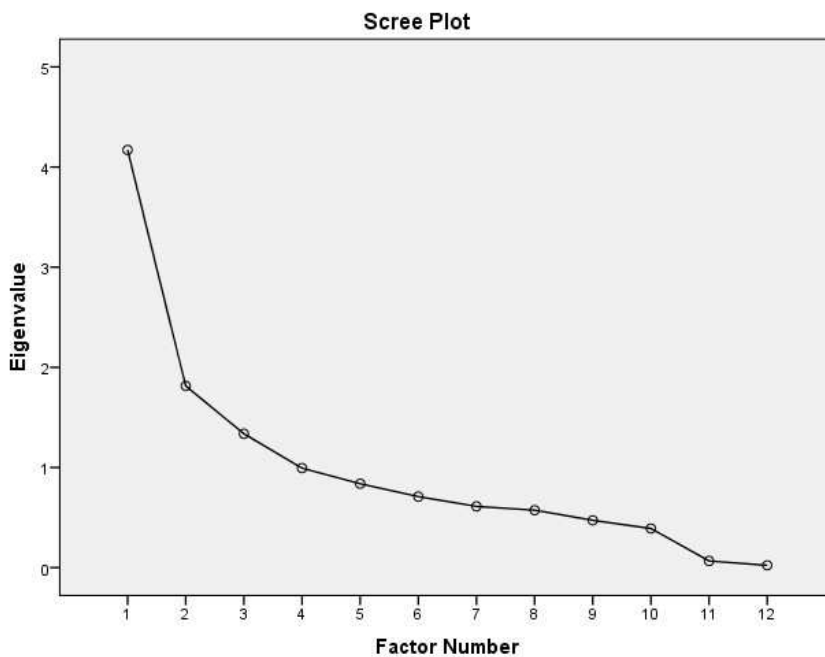


Figure 2: EFA scree plot for the RFQc/u

Table 8
Rotated Factor Matrix^a

RFQc/u	Factor	
	1	2
LRFc36	.973	-.230
LRFc29	.943	
LRFc22	.526	
LRFc35	.384	
LRFc17	.240	
LRFc1	.136	
LRFu29	-.259	.923
LRFu36	-.415	.909
LRFu35	-.173	.308
LRFu17		.282
LRFu27		.232
LRFu8		.141

Note. Extraction Method: Maximum Likelihood. Rotation Method: Varimax with Kaiser Normalization.a. Rotation converged in 3 iterations.

The table shows the rotated factor matrix; values with absolute value less than .1 have been omitted. It can be seen that with the exception of one item (c36) all the c items load on Factor 1, and for the exception of few items (u29, u36 and u35) all of the u items load on Factor 2. A factor plot was also performed and this showed that the c items are all near zero for Factor 2, while the u items tend to be near zero for Factor 1.

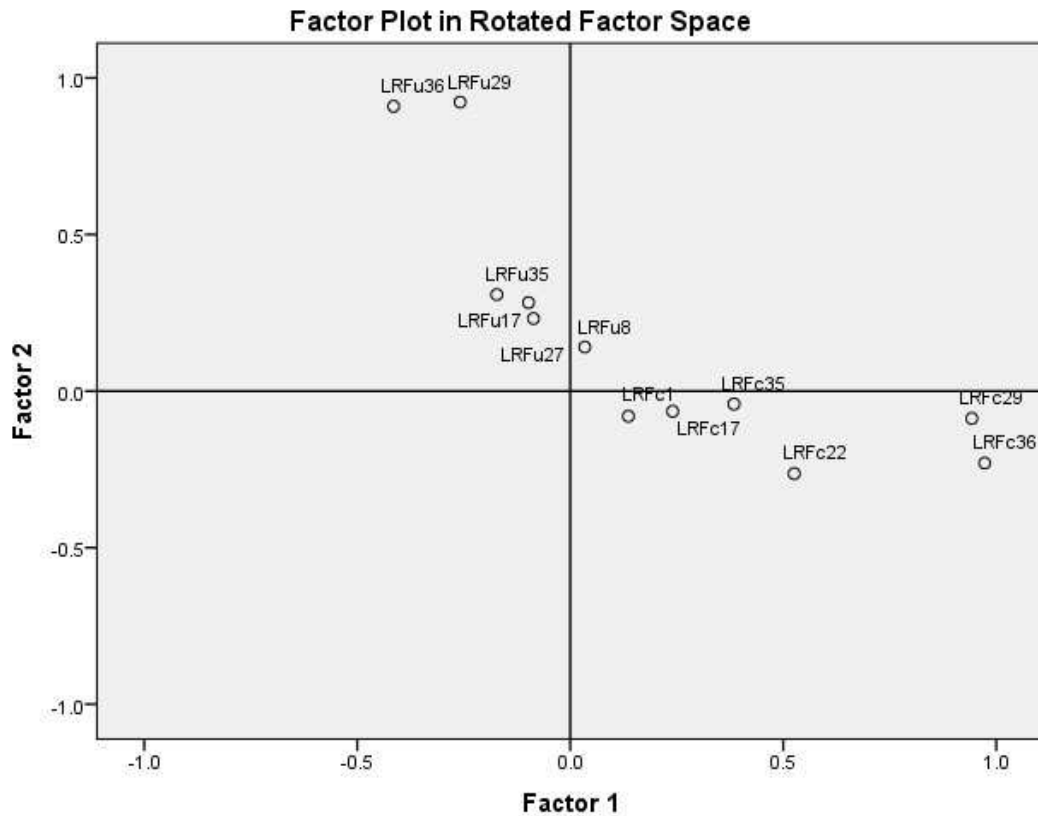


Figure 3: Rotated factor plot for the RFQc/u.

The analysis confirmed that the two factor subscale structure reported for the scale was also to be found in the present sample.

Hypothesis Testing

Part Two: Comparing 3 groups on mentalising ability using the RFQc/u. Exploring differences in mentalising ability in the 3 groups using the RFQc/u showed the following findings. For RFQc, individuals presenting with ED and concurrent SH (ED_SH) scored lower than individuals with ED no SH, who in turn scored lower than controls.

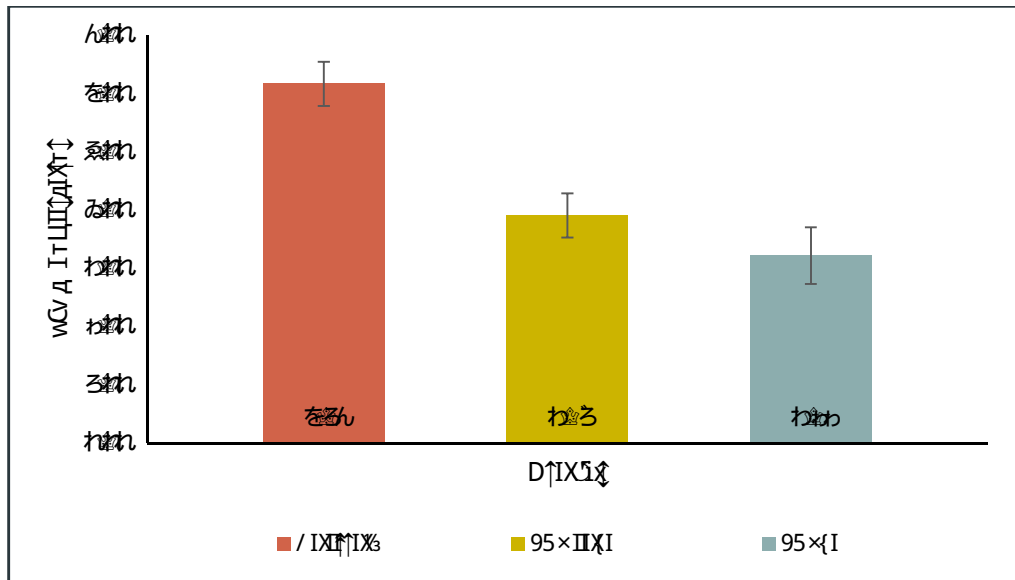


Figure 4: RFQc mean scores across the three groups. Error bars are 95% CI.

For RFQu, individuals with ED and concurrent SH (ED_SH) scored highest, followed by the ED_noSH group, who, in turn, scored higher than the control group

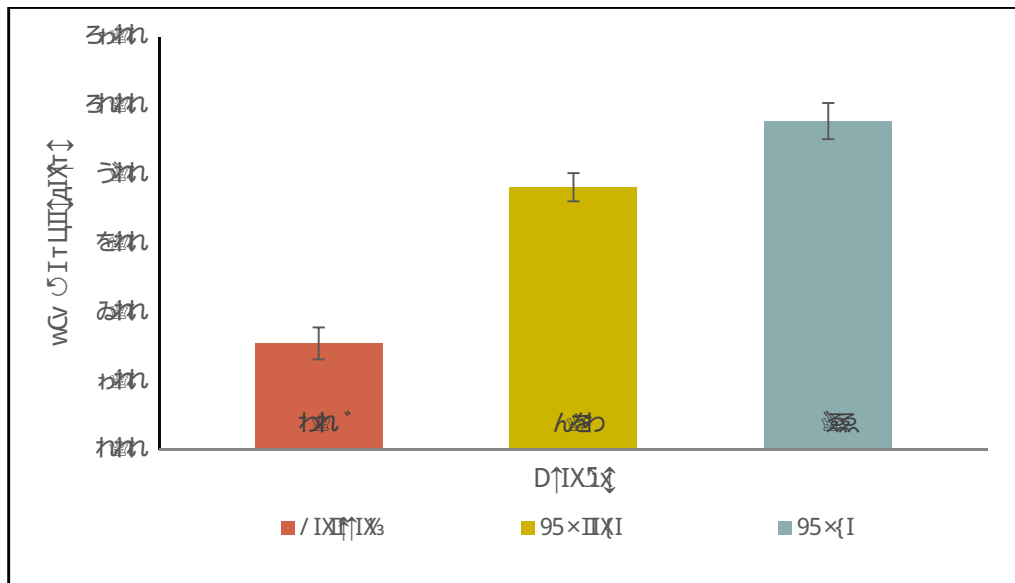


Figure 5: RFQu mean scores across the three groups. Error bars are 95% CI.

A one-way MANOVA with the 3 groups as Independent Variable and the two subscales as Dependent Variables revealed a significant multivariate main effect of groups, Pillai's $V = .29$, $F(4, 452) = 19.64$, $p < .001$, $\eta^2 = .14$. In addition, separate univariate ANOVAs on the outcome variables revealed two significant effects: RFQc $F(2, 226) = 12.06$, $p < .001$, $\eta^2 = .09$ and RFQu $F(2, 226) = 47.23$, $p < .001$, $\eta^2 = .29$. Pairwise comparison suggested that the control

group differed significantly from both the ED_no SH and from the ED_SH (respectively $p < .05$; $p < .001$) on the RFQc scale. Similar results were replicated for the RFQu scale ($p < .001$) for both the ED_no SH and the ED_SH group. This was confirmed by a one-way MANOVA between the control group and the ED with/without SH: Pillai's $V = .26$, $F(2, 226) = 41.64$, $p < .001$, $\eta^2 = .26$. Furthermore, separate univariate ANOVAs on the RFQu and the RFQc gave the following results: RFQu $F(1,227) = 83.54$, $p < .001$; RFQc $F(1,227) = 22.03$, $p < .001$.

When the SH group was compared to the ED_no SH group, a one way MANOVA revealed a significant effect Pillai's $V = .04$ $F(2,152) = 3.58$, $p < .05$, $\eta^2 = .045$. In addition, separate univariate ANOVAs on the outcome variables revealed significant results for the RFQu $F(1, 153) = 7.07$, $p < .05$, but not for the RFQc $F(1, 153) = 1.54$, $p > .05$. These last results are nicely summarized by the Homogenous Subset tables below:

Table 9

Homogenous Subset for the RFQu

		Subset			
Three groups in the design		N	1	2	3
Scheffe ^{a,b,c}	Control	74	3.09		
	ED alone	97		7.63	
	ED+SH	58			9.1

Table 10

Homogenous Subset for the RFQc

		Subset		
Three groups in the design		N	1	2
Scheffe ^{a,b,c}	ED+SH	58	3.22	
	ED alone	97	3.91	
	Control	74		6.17
Sig.			.532	

Results from the MANOVAs and the subsequent ANOVAs show that the RFQc and the RFQu subscales differed between the 3 groups. However, in order to explore how strong this effect was, and whether it would enable a clinician to predict group membership, the MANOVA was followed up with a Discriminant Analysis, which looked specifically at differentiating SH from non-SH within the ED group. Results show that the discriminant function significantly differentiated amongst the groups, $\eta^2 = .955$, $\chi^2(2) = 6.99$, $p < .05$.

Canonical Discriminant Function Coefficients revealed that the RFQu loaded highly on this function ($b = 1.08$) compared to RFQc ($b = .16$). Classification results showed how this

function does a good job in classifying ED_noSH. In order to have an unbiased estimate of classification success, results should be taken from the Cross-Validated analysis in the table, where the function is calculated while omitting each case in turn and is then used to predict membership for that person. That makes the accuracy of predicting ED_noSH 89%. On the other hand, the ED_SH group was classified poorly (24%).

Table 11
Classification Results ^{a,c}

		Three groups in the design	Predicted Group Membership		
			ED+SH	ED alone	Total
Original	Count	ED_SH	14	44	58
		ED alone	8	89	97
	%	ED_SH	24.1	75.9	100.0
		ED alone	8.2	91.8	100.0
Cross-validated ^b	Count	ED_SH	14	44	58
		ED alone	8	89	97
	%	ED_SH	24.1	75.9	100.0
		ED alone	8.2	91.8	100.0

Note a. 66.5% of original grouped cases correctly classified.

b. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

c. 64.5% of cross-validated grouped cases correctly classified.

The discriminant function discriminated the ED_no SH from the ED_SH group. To see if predictability could be improved with the addition of other information about a person, a Stepwise Discriminant Analysis was performed with several variables amongst which were age, gender, relationship status and personal therapy. It appeared that age was the second best predictor, $\eta^2 = .91$, $F(2) = 13.03$, $p < .05$. When age was included in the analysis, the predictive value of the scale for identifying self-harmers increased to 27.6%, or 25.9% on the cross-validated measure.

Table 12

Classification Results^{a,c} when age was included in the analysis

		T hree groups in the design	Predicted Group Membership		
			ED+SH	ED alone	Total
Original	Count	ED+SH	16	42	58
		ED alone	13	84	97
	%	ED+SH	27.6	72.4	100.0
		ED alone	13.4	86.6	100.0
Cross-validated ^b	Count	ED+SH	15	43	58
		ED alone	13	84	97
	%	ED+SH	25.9	74.1	100.0
		ED alone	13.4	86.6	100.0

Note. a. 66.5% of original grouped cases correctly classified.

b. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

c. 65.8% of cross-validated grouped cases correctly classified.

Part three: Exploring convergent validity between the RFQ c/u and allied concepts (empathy, mindfulness, alexithymia, theory of mind). In order to explore the convergent validity of the RFQc/u, the subscales were correlated with a number of related measures of mentalising. Results from Spearman's rho revealed a significant positive correlation between the RFQc and the PTS that measured empathy ($r = .37, p < .001$) and a significant negative correlation between the RFQu and the PTS ($r = -.40, p < .001$). Similar results were reported for the correlation between the RFQ and mindfulness (KIMS): RFQc ($r = .31, p < .001$); RFQu ($r = -.46, p < .001$). Instead, when alexithymia was explored, the correlation produced the following significant results: RFQc ($r = -.39, p < .001$); RFQu ($r = .58, p < .001$). Lastly, the relationship between the RFQ and the theory of mind (RMET) displayed the following: RFQc ($r = -.02, p > .05$); RFQu ($r = -.05, p > .05$).

Table 13

Correlations between the RFQ and related measure

	RFQu	PTS	KIMS	TAS	RMET
RFQc	-.599**	.373**	.313**	-.393**	-.029
RFQu		-.408**	-.461**	.581**	-.057
PTS			.104**	-.297**	.136
KIMS				-.598**	.050
TAS					.073

PTS= Empathy: perspective-taking subscale; KIMS= Kentucky inventory mindfulness skills; TAS= Toronto Alexithymia Scale

In terms of the rapport between mentalising and its allied constructs, Table 13 shows that the certainty/uncertainty subscales correlate to constructs in opposite directions. For example, results reveal that the RFQc measures a construct similar to the one captured in empathy and mindfulness. Results also reveal a negative correlation between mentalising and alexithymia, all as per our initial hypotheses. This suggests that having a solid emotional vocabulary is essential to the development of a reflective function as measured by the RFQc. Instead, contrary to the research’s hypothesis, mentalising as evaluated by the RFQc produces a significant negative correlation with the ToM. This could arguably be because the RFQc and the RMET tap into different aspects of the same construct; the former tapping into a more emotional aspect, and the latter tapping into a more physical aspect (reading physical features).

Different results arise for the RFQu, which shows a significant negative relationship with the measures of empathy and mindfulness and a positive correlation with alexithymia. It could be hypothesised that the RFQu, whose higher scores measure hypomentalising, taps into individuals’ difficulty to adopt multiple perspectives and hence, to consider other people’s standpoints. A reduced capacity to reflect on mental states can also arguably make it more difficult to be mindful of internal experiences. Similarly, a lack of curiosity towards mental states can be arguably associated with a higher degree of alexithymia.

Discussion

Research findings

The current project was aimed at investigating mentalising capacities in three groups chosen according to different hypothesised reflective functioning abilities. These groups were as follows: 1) individuals presenting with ED and concurrent SH; 2) individuals presenting with ED only; 3) a control group.

Part one of the analysis investigated whether there were significant differences in mentalising abilities on the 3 subscales of the RFQ-54 amongst the three groups. In order to better explore these differences, the research question was conceptualised into three main hypotheses. A one-way MANOVA reported a significant difference between the groups. As visible from Table 2, data confirmed that individuals presenting with ED and concurrent SH reported less mentalising ability than individuals who present with ED_no concurrent SH, who in turn, displayed less mentalising capacity than the control group. This trend was picked up by the RFQ-A and by the RFQ-B (hl), but not by the RFQ-B (lh) subscale.

Conclusions for hypotheses II and III (H_{II}) Individuals who present with ED with or without SH will display lower levels of mentalising ability compared to the non-clinical control group; (H_{III}) individuals who present with comorbid ED and SH will display lower levels of mentalising ability than individuals with ED and no concurrent SH, and also reported significant differences, supporting the alternative hypotheses. Findings showed that individuals who presented with EDs displayed significantly lower levels of mentalising ability compared to the non clinical control group (hypothesis H_{II}). Similarly, individuals who presented with ED and concurrent SH exhibited significantly lower levels of mentalising ability compared to participants who present with ED_no concurrent SH (hypothesis H_{III}). The discrepancies between the three RFQ-54 subscales in picking up mentalising group differences, as explored by subsequent Univariate ANOVAs, have already been reported in the Results section and will not be repeated. However, findings suggest that the RFQ-B (hl) is the most appropriate subscale to identify mentalising variations amongst the 3 groups.

Part two of the analysis explored the same hypotheses using the RFQc/u. In order to better appreciate the results, the reader is reminded that the questionnaire's subscales, namely the RFQc and the RFQu that tap into opposite dimensions of mentalising: hypermentalising and hypomentalising respectively. The reader is also reminded that the subscales share a number of questions scored in the opposite direction.

Given what has just been mentioned, it seems understandable that the three groups scored on opposite trajectories on the two subscales, confirming low certainty and high uncertainty on mental states. For example, results suggest that the ED_SH group scored lowest

on mentalising capacity on the RFQc, implying the lowest certainty about mental states amongst the three groups. They were followed by the ED_noSH group that, in turn, scored lower than the control group. Correspondingly, results suggest that the ED_SH group scored highest on the RFQu, indicating the highest degree of uncertainty about mental states. The ED_SH group was followed by the ED_noSH group that scored higher than the control group.

Given the different dimensions of hypermentalising and hypomentalising that the RFQc and the RFQu tap into; given the higher scores that individuals who present with ED_SH report on the RFQu, these findings suggest that individuals with ED_SH struggle mostly with hypomentalising. It can be argued that this conclusion is in line with current literature that describes concrete thinking styles in narratives of individuals who present with ED and SH alike (Skarderud, 2007). Indeed, hypomentalising has been defined as extreme difficulty in developing complex models of the mind of others and/or the self (Badoud et al., 2015), which might explain this client group's lack of knowledge about mental states and extreme difficulty in describing others in terms of mental states. This is also confirmed by the RFQu positive correlation to the TAS, the alexithymia scale, implying a link between hypomentalising and alexithymia that has also been reported in other functional somatic disorders (FSS; Luyten, 2011).

In terms of mentalising dissimilarities, a one way MANOVA reported significant differences amongst the three groups. Subsequent statistical tests confirmed significant differences amongst the three groups on both the RFQc and the RFQu, therefore finding support for the alternative hypothesis H_{IV}-There will be significant differences in mentalising ability between individuals who present with ED_no self-harm, individuals who present with ED and concurrent SH and a control group. Similarly, when hypothesis H_V was investigated with a MANOVA and subsequent univariate ANOVAs, results showed support for this, confirming that the control group significantly differed on mentalising ability from the ED groups on both subscales. Likewise, hypothesis H_{VI} was supported, with a one way MANOVA reporting significant differences between individuals presenting with ED with/without SH. Interestingly, this difference was picked up by the RFQu, but not by the RFQc as far as this client group was concerned.

The implications of these findings are substantial as they corroborate data published by Badoud et al. (2015) and Kuipers, Van Loenhout, van der Ark and Bekker (2016) on the relationship between mentalising and SH. Badoud et al., Kuipers et al. and the present study confirm an association between low mentalising capacity, in particular hypomentalising, and SH. Whereas this association was previously reported in a community-based study (Badoud et al., 2015), the current study validates Kuipers et al.'s results by confirming the relationship between mentalising-deficits and SH in a group of individuals presenting with ED

symptomatology. The current research further confirms that a history of ED and concurrent SH is associated with the lowest levels of certainty and highest degrees of uncertainty about mental states, which confirms Kuiper et al.'s results. It can be argued that these findings might explain the lack of reference to internal states present in narratives of individuals who engage in ED and SH behaviours (Skarderud, 2007).

As discussed previously in the course of this thesis, an important indicator of good mentalising is an attitude of curiosity towards mental states, coupled with the awareness of the opaqueness of above (Allen & Fonagy, 2007). The literature further suggested that a certain degree of certainty on internal consciousness is adaptive (Allen & Fonagy, 2007; Bateman & Fonagy, 2007; Badoud et al., 2015). This is also demonstrated by correlations between the scores on the RFQc and measures of clinical and psychological variables (Badoud et al., 2015) which prompted the authors to argue that where this functional degree of certainty is absent, individuals might be more susceptible to SH behaviours. The current study confirms that where a functional degree of certainty is not present, individuals may be more likely to resort to ED, as well as SH behaviours. In addition, the current research highlights that the presence of both behaviours is linked to the deepest hypomentalising deficit.

Badoud et al. (2015) suggested that the adaptive value of SH as a powerful self-regulation strategy against overwhelming emotions might be the clue to explain the connection between hypomentalising and SH. The authors argued that hypomentalising might prevent individuals from engaging in less action-based coping strategies. The present study and the available literature on the development of mentalising as discussed in the Introduction section might help to shed more light on this point. It has been argued that the developmental tasks of agency of the 'self' that lead to the emergence of the capacity to mentalise include a 'teleological' phase in which children understand the world and outcomes only in physical terms (Csibra & Gergely, 1998; Fonagy et al., 2002; Gergely & Csibra, 1997). It can be argued that hypomentalising is strictly connected to the teleological phase of development and the 'teleological mode of functioning' (Bateman & Fonagy, 2007), prompting individuals to conceive of change only in concrete and physical terms.

Interestingly, whereas Badaud et al. (2015) reported a significant correlation between both the RFQc/RFQu and SH on a community-based sample, the present findings suggest that the RFQu only is able to pick up on mentalising differences between the ED_no SH and the ED_SH group. It is recognised that the two statistical tests are different. However, this might provide some future direction for research as it will be important to explore whether there are different factors in action in individuals presenting with ED and SH compared to community-based individuals and whether the RFQu is a more suitable subscale to use with a clinical population.

A further exploration of the RFQu through a discriminant analysis revealed that the subscale has a good predictive power as far as eating psychopathology is concerned, as it is able to accurately discriminate 89% of individuals who present with ED. This predictive power does not seem to be strong as far as predicting SH group membership, even when other variables were included in the analysis. These findings suggest that: (a) the RFQu is more discriminating than the RFQc in determining SH within the ED group, and (b) that the RFQu can quite reliably be used as a screening device to identify those who are not at risk of SH. Where an individual is indicated to be at risk by this screening, there is still only a 25 to 30% chance that they will engage in SH.

The last part of the analysis (part 3) explored the relationship between the RFQ and its allied concepts. The interaction of the subscales has already been discussed, so it will not be repeated here, but the reader is reminded that the RFQc displayed a positive relationship with empathy and mindfulness and exhibited a negative relationship with alexithymia, whereas the RFQu displayed a positive correlation with alexithymia and a negative correlation with empathy and mindfulness. These findings, which confirm previous research conclusions (Badoud et al., 2015), suggest that hypermentalising is a concept more akin to empathy and mindfulness and negatively correlated to alexithymia. It is arguable that in order to create more complex models of the mind, which characterises hypermentalising, an individual needs, first of all, to have an internal emotional vocabulary. This, in turn, will arguably enable them to recognise and be empathic towards others' internal experiences as well as being mindful of their own.

Instead, hypomentalising as measured by the RFQu mirrors a lack of attunement and/or knowledge of mental states that is linked to the inability to name, recognise and articulate mental states (alexithymia). Understandably, this way of being makes it impossible for individuals to be mindful of their own internal experiences and makes it very hard to be empathic towards others. Interestingly, contrary to initial speculations, none of the subscales reported a correlation with the ToM measure. This finding, which confirms previous results (Rogoff, 2011; Taylor et al., 2008), might indeed suggest that the RMET and the RFQ rely on different cues for understanding emotions.

Of note, is also the RMET displaying a low internal reliability (Cronbach's $\alpha = .55$). Hence, caution should be exercised when interpreting the results. It could be that methodological flaws related to the present study might have contributed to these findings. The RMET as administered by Baron-Cohen et al. (2001) was presented to participants with a set of eyes on each page and a glossary to clarify less commonly used words (i.e., agnostic, despondent). Instead, the RMET as administered in the current study was the last of the five questionnaires and was presented with six set of eyes on each page. No glossary was provided. It can be speculated whether participants might have been tired, or might have lost interest, or

indeed might have been confused by the number of stimuli on one page, giving as a result less accurate answers.

In order to reflect upon the implications arising from the results of this thesis, the Discussion will be divided into several sections. The researcher will consider the issues concerning mentalising differences between groups in terms of the theoretical background discussed so far. Reflections for this section will include consideration of the claim of mentalising being a core difficulty in ED with/without SH, reflections on the specific link between ED and SH, as well as contemplation of the possible influence of the wider context on the results of this research. Given that the RFQ-54 has now been superseded by the RFQc/u, the Discussion will focus only on the latter.

As well as examining the theoretical implications of the current findings, it is crucial to reflect upon the practical implications that have emerged out of this thesis. In this regard, the results of this research will be discussed in relation to some contemporary approaches to the treatment of ED with/without SH. Eventually, the implications for psychotherapy will be considered, including the therapist's stance, newer specifically-targeted interventions for this client group and combinations of older and newer concepts. Concerning the latter point, the researcher will reflect upon a suggested transdiagnostical model which places the literature discussed and the findings from the present study within a systemic framework (Asen & Fonagy, 2012). Ultimately, considerations about the limitations and strengths of the current thesis will be addressed, as well as recommendations for future studies.

Theoretical Implications of Part one: Exploring Differences in Mentalising Ability

Mentalising as a core difficulty. The results of this study seem to support theoretical paradigms that advance the hypothesis that impaired mentalising might be a core issue in EDs (Skarderud, 2007; Gillberg et al., 2010; Kuipers et al., 2016; Rothschild-Yakar, Levy-Shiff, Fridman-Balaban, Gur, & Stein, 2010;). Indeed, both clinical groups presented with significant lower levels of mentalising ability compared to the general population, supporting Skarderud's claim regarding the possible specific nature of difficulties in eating psychopathology. In addition, findings showed that the group with concurrent ED and SH presented with more hypomentalising difficulties compared to the ED_noSH group. This result suggests that impaired mentalising is an even greater core issue for EDs with concurrent SH.

Given that mentalising deficits have traditionally been associated with specific interpersonal difficulties clustered under the term of Borderline Personality Disorder (BPD) and that a diagnostic criterion for BPD is the presence of SH, it could be argued that the group with comorbid presentations might be over-represented by individuals who present with features of

BPD. Whereas this could have arguably been a confounding variable in the present study, it has also been observed that some professionals tend to label 'borderline' virtually any client who is difficult to deal with and nearly all individuals who engage in self-cutting (Lilienfeld & Arkowitz, 2011). Instead, a 2006 study by Nock et al. of hospitalised adolescents who engaged in SH suggested that, contrary to widespread assumptions, 48% of the sample did not meet DSM criteria for a diagnosis of BPD.

Furthermore, even though difficulties related to 'borderline personality' might be present, it can be argued that exploring similarities between ED and BPD, rather than concentrating on differences, might enhance understanding of the crucial role that mentalising seems to have in both presentations. Indeed, in their conclusion of their review on attachment and mentalising in individuals presenting with ED, Kuipers and Bekker (2012) recommended future research on ED and their relationship with personality disorders' symptoms and diagnoses. Undeniably, more recent and current endeavours seem to concentrate on both presentations together (Kuipers et al., 2016; MarTinko, JakpiP, SkoTiP, & FraniP, 2013; Robinson, 2015; Robinson et al., 2014).

Additionally, the current research findings also appear to address the issue of whether clients with a stronger need to control the body, displayed by resorting to both ED and SH symptomatology, display lower mentalising capacity. As the reader might appreciate, this seems to be the case. The current thesis suggests that the deeper the inability to make sense of one's own and others' inner experiences and to interpret behaviour according to mental states, the more the focus on the body. More specifically, it seems that the more an individual presents with difficulties with symbolic representations and abstract thinking, characterised by lower mentalising abilities, the more they seem to concentrate their energies on their immediate physical world, (i.e. the body). This indeed appears to support Levens' (2002) claims about a lack of a symbolic capacity being evident in this client's group experience of their own bodies and the theoretical notion of the teleological stance of functioning (Fonagy et al., 2001).

Theoretical implications: The specific link between ED and SH. An additional theoretical implication originated from the current study relates to the recognised existence of a link between ED and SH which, as previously mentioned, some researchers had attempted to explain with impulse-control difficulties (Lacey & Evans, 1986) whereas others had related it to a 'repetitive self-mutilation syndrome' (Favazza & Rosenthal, 1993). These theories had suggested that multi-impulsivity, characterised by engaging in more than one impulsive

behaviour⁸, was responsible for a more severe and treatment resistant symptomatology (Fitcher et al., 1994; Lacey & Evans, 1986).

However, recent evidence suggests that a history of substance misuse, significantly predicted lower rather than higher occurrence of SH which seems to contradict the idea that SH and substance misuse belong to the same constellation of behaviours regarded as reflecting impaired impulse control (Cucchi et al., 2016). Indeed, whereas reflective function correlates separately with every impulsive behaviour as described in the literature, or whether the link is specific to SH is not known at present and such an issue was beyond the scope of this research. Undoubtedly, the relationship between impulsivity and mentalising has not been investigated sufficiently and further research on this topic appears to be crucial before conclusions can be drawn.

However, it can be argued that the casting aside of SH as simply an `impulsive behaviour_, thrown together in a `melting pot_ with several other acts not measured in their own right, seems to fail to encapsulate its complexity. For example, principal component and factor analyses of the relationship between EDs and SH from a dimensional point of view reported the existence of at least a two factors solution. SH loaded on a `compulsive_, as well as on an `impulsive_ factor⁹ (Favaro & Santonastaso, 1998, 2000, 2002) and it appeared clear that not all acts of SH are impulsive; some are indeed more fixated and habitual (Favazza & Simeon, 1995). Furthermore, it could be argued that `multi-impulsivity theories_ fall short of answering the question of why the specific link between ED and SH exists.

The present findings seem to suggest another explanation to account for this link: that mentalising might play a role in this relationship (Kuijpers et al., 2016; Perkins, 2009; Skarderud, 2007). Despite agreeing that impulsivity might be a contributing factor in the relationship between ED and SH, it can be argued that impulse control, together with the capacity to monitor and regulate one's own emotions, is the product of the development and the organisation of the `self_, which in turn is the result of the development of the capacity to mentalise (Bateman & Fonagy, 2004; Fonagy et al., 2002).

In regard to this, Taubner and Curth (2013) related that mentalising acted as a mediator between early traumatic experiences and aggression in adolescents. Moreover, Perkins (2009)

⁸ DSM 5 examples of impulsive behaviours include: self-harm, binge eating, substance misuse, pathological gambling/compulsive spending, kleptomania, trichotillomania and compulsive sexual behaviour amongst others (APA, 2013).

⁹ Although highly interesting and arguably relevant, the researcher has reluctantly made a pragmatic decision not to expand upon this point due to space constriction. The reader is referred to the above references for further information.

reported that mentalising acted as a mediator of multi-impulsivity in EDs, although she stated that the direction of the mediation effect was not clear. Although beyond the scope of this project, the outcome of the present study seems to support these findings. Given that by definition the group with concurrent ED and SH difficulties engage in more than one impulsive behaviour, it is reasonable to suggest that this cohort might be the most impulsive of the three. Hence, it seems possible to deduce from the findings that the lower the mentalising function, the higher the impulsivity. Whether this negative correlation is relevant, or indeed significant, would be worth exploring in future studies.

A very important point was raised by Bateman and Fonagy (2007). The clinicians suggested that due to a lack of symbolic capacity, which is allegedly taken for granted in traditional psychotherapy, individuals with impaired mentalising functions did not benefit from traditional approaches. This claim was echoed by Katznelson (2014) who concluded that there is evidence to suggest that having an understanding of, and being able to think, in terms of mental states and how these affect behaviour, has an impact on people's ability to engage in psychotherapy. In this respect, Katznelson (2014), who reviewed the role of RF as a predictor and mediator of change, concluded that that mentalising can change only through approaches that specifically focus on the integration of split mind states. Indeed, the current research results seem to validate these points by showing no correlation between mentalising and length of therapy. These results, which might seem puzzling to start with, become more meaningful if the economic and political climate is taken into consideration.

MBT is a fairly new treatment rarely used for the therapy of individuals who present with ED (Balestrieri, Zuanon, Pellizzari, Zappoli-Thyrion, & Ciano, 2015). The relevance of mentalising and MBT to ED has only just recently been advanced in the literature, which means that MBT is not routinely been offered for eating-related difficulties, especially in the NHS. Of note is that, even at a renowned NHS ED centre such as the Maudsley, where MBT treatment for eating psychopathologies is allegedly available according to their website (SLaM National Services, n.d) the approach is not officially offered due to allocation of resources.

As a result, it is feasible to presuppose that close to virtually none, or very few, of the individuals presenting with ED has had experience of MBT or specifically targeted mentalising-enhancing treatments. This might help to explain the non significant correlation between mentalising and length of therapy and might give support to Skarderdud's (2007) and Katznelson's (2007) claims that recommend that psychological interventions with individuals with compromised reflective functions should be specifically focused on the rehabilitation of this function.

Practical implications of the present study for the current approaches for the treatment of ED and SH. Given the current findings, it seems crucial that the presence of SH in the ED population is assessed at intake. The same can be argued for people who SH, for whom it seems important to assess whether they present with eating symptomatology. However, despite Sansone and Sansone (2002) had already emphasised the utmost importance of simultaneously assessing SH and ED pathologies, a review of the literature revealed that no ED's assessment tools routinely used in clinical practice were specifically designed to tease out direct SH (Sansone & Sansone, 2002). In addition, it seemed that none assessed the combination and the complexity of concurrent ED and SH symptomatology (Levitt et al., 2004).

The lack of a unified assessment tool is reflected in the current approaches offered to address the management of SH among individuals who present with ED symptomatology. Despite a variety of psychodynamic, interpersonal, dialectical and cognitive/behavioural interventions (Levitt et al., 2004), NICE guidelines recommend CBT as the treatment of choice for ED and separately for the management of SH. Nevertheless, a systematic review of behavioural interventions for BN reported non-significant differences when group CBT was compared to Interpersonal Therapy (IPT) (Shapiro et al., 2007). In addition, when individual CBT was compared to IPT, the long-term results were poorer for the former (Shapiro et al., 2007) hence confirming that although CBT can be effective for BN, many still remain unwell (McIntosh, Carter, Bulik, Frampton & Joyce, 2011). Instead, when treatments for AN were compared across the adult population, a more recent review of clinical trials, practice guidelines and emerging interventions confirmed that no specific approach has shown superiority (Watson & Bulik, 2013).

Success rates seem to increase when CBT-E is adopted as a therapeutic model. Fairburn et al. (2015) reported remission rates of 65.5% in a BN sample. In addition, Byrne, Fursland, Allen and Watson (2011) report a 66.7% success rate in a mix ED sample. However, rates fall to 53% and 40% when dropouts are taken into consideration (Byrne et al., 2011; Fairburn et al., 2015), hence confirming the need for further research.

It is undeniably true that the above-mentioned approaches are diverse and that they target different aspects and different meanings of SH. Nevertheless, clinical drop-out rates and relapse/recovery percentages suggest that more research is needed. In particular, the present study indicates the need to address ED and SH simultaneously when the two presentations occur together and the need for the characteristic pre-mentalistic states of mind to be taken into consideration when devising interventions.

More practical implications: The focus of treatment. A other crucial implication derived by this study relates to the current approaches' focus on reducing the act, reframing it as

ego-dystonic and, eventually, eradicating it. This was substantiated by Batemen and Fonagy (2004, 2007) who confirmed that in dealing with individuals who present with embodied minds and who tend to act, rather than feel, therapists feel compelled to attend to the behaviour, rather than to the mind. This attitude is further confirmed by Levitt et al. (2004) who claims that gradual exposure to situations and emotional triggers for the SH behaviour is necessary `the goal was to extinguish the self-harming reactions through habituation to threatening stimuli`.

Nevertheless, it can be argued that focusing on the act, or indeed, the enactment, can have profound negative implications if individuals lack reflective capacity. By moving away from a focus on the mind, clinicians might get into a power struggle with their client over the need to eat or stop cutting, for example. No-harm and anti-suicide contracts are all too unproductive examples of such struggles. Given that there is currently no empirical evidence, nor a theoretical or conceptual model to substantiate the use of the former (Drew, 2001; Hyldahl & Richardson, 2011), nor of the latter (McConnel-Lewis, 2007; Rudd et al., 2006), it can be speculated as to whether practitioners seek these explicit agreements in order to appease their own anxiety about risk and to protect themselves from malpractice litigation (McConnel-Lewis, 2007).

Hyldahl and Richardson (2011) further argue that clients may not be able to give up such an effective coping mechanism and that if these contracts are introduced without a strong alliance, they might do more harm than good. This lack of scientific evidence is corroborated by Kroll's (2000, as cited in Rudd, Mandrusiak & Joiner, 2006) findings that suggested that 41% of clinicians who used no-suicide contracts had clients who died by suicide or made very serious attempts while under contract. Additionally, Drew's (2001) logistic regression analysis reveals that patients with no-suicide contracts and with higher levels of restriction had a significantly higher likelihood of SH behaviours.

Furthermore, it can be argued that clients might feel pressurised into agreeing to endorse such contracts for fear of losing the support they desperately need. Concerning this, it seems essential to consider the implications of statements such as the following: `the patient must contract absolute containment of all suicidal impulses. If the patient is unable to do so, we supportively invite them to return for future evaluations when they are able to make this commitment` (Levitt et al., 2004, p. 127). It can be speculated that statements like these can be deleterious and, indeed, damaging to the therapeutic relationship, in that clients might see lying and a lack of transparency as the only option not lose the support. It can also be argued that such contracts may lead to further shame, secrecy and guilt should clients not be able to honour the agreement.

Hence, focusing on stopping the behaviour through the use of contracts does not always appear to have the desired effect. On the contrary, it can have profound negative implications especially if the thinking pattern of individuals who present with impaired mentalising ability is considered. It can be speculated whether to be denied the embodiment of emotions could feel almost as existential disintegration to people who exist in the teleological mode of functioning. Furthermore, to remove the only means that this population has to express their own emotions without providing a suitable 'grounding', cannot only be utterly terrifying' it also fails to recognise the utmost importance that such behaviours have for the person.

Starving, bingeing, or indeed cutting is, in the mind of the person who engages in it, far from being self-destructive. It is, instead, a cherished and precious coping mechanism (Hyl Dahl & Richardson, 2011). These acts are in the majority of cases 'a frantic attempt by someone with low coping skills to mother herself [...] a cold but available substitute for the embrace, kiss or loving touch she truly desires' (Conterio & Lader, 1998). Individuals are often very emotionally attached to such behaviours which are deeply rooted and relied upon. Hence some people can, understandably, be very ambivalent, when not overly reluctant to give them up.

Extreme body control and/or enactment happen when the 'self' is poorly integrated and mental existence is doubted (Fonagy et al., 2002). Physical pain becomes a way to remind oneself that they are alive and to fill in that existential void and emptiness (Gardener, 2001; Self-harm, 2008) that is characteristic of pre-mentalistic states of mind. It can be argued that withdrawing such a powerful coping mechanism from the person without replacing it with something else similarly powerful can place individuals at fear of existential death (Self-harm, 2008). This can be understood if the reader takes into consideration individuals who exist in a teleological mode of functioning: concrete reality becomes the basis for their ability to perceive their mental existence. If the possibility of reinstating one's own sense of self (as one knows it) is taken away without appropriate replacement coping skills, it can be argued that the self would be perceived to be at risk of complete disintegration. Lastly, it has been suggested that clinicians' emphasis on establishing a causal link between the act and the behaviour can further alienate individuals whose capacity for mentalising is poor and whose sense of self-esteem is determined by their ability to feel some control over their bodies and their lives (Farber, 1997).

Practical implications: A summary. It appears that there are several practical and clinical implications originating from the current study. For example, it seems imperative that clinicians become more aware of the significant relationship between ED and SH and more able to identify both difficulties at assessment and throughout treatment. In this regard, given the evidence-based political climate in which services are embedded, it might be useful to devise valid, specific assessment tools that screen for the presence and the types of concurrent ED and SH pathology. At present, the only available unified assessment tools, the Self-Injury Self-

Report Inventory (SISRI; Levitt et al., 2004) lacks scientific validity and is not routinely used with this client-group. As a result, further studies on the validity and reliability of this tool should be carried out before drawing any conclusions. Further research should also concentrate on the development of alternative combined screening measures.

A further implication originating from this study relates to the need to address both difficulties concurrently. It can be argued that, being split between services and departments, only increases the risk that some of the symptoms might be missed or that clients might get caught into the `revolving door phenomenon_, or, indeed, `fall in between services_. From a philosophical and theoretical point of view, it can be argued that the separation between services mirrors the current underlying Cartesian Dualistic philosophy that permeates treatment approaches and interventions. With regards to clients, it can be claimed that being referred on and/or signposted to alternative facilities or, indeed, being split between services, can collude with the sense of fragmentation they seem to feel inside and that is externalised in the mind versus body split. Lastly, following the current findings, it also seems crucial to routinely assess mentalising ability, especially in populations considered at risk.

The Present Findings and Their Impact on Current Treatment Approaches to the Management of SH Behaviour in Individuals Presenting with ED: Dialectical Behavioural Therapy (DBT).

The above section briefly touched upon some of the implications of the current findings upon existing psychotherapeutic approaches to the management of SH in clients presenting with ED. Hence, before discussing more in-depth the implications of the present research for psychotherapy in general, it might be helpful to consider what was mentioned above in the context of current therapeutic enterprises. Of note, is that a full, or even partial, description of all the current therapeutic approaches to the treatment of SH in ED is beyond the scope of this thesis and, thus, the present section will not expand upon the models. The theoretical concepts of the individual treatment-strategies will only be discussed as long as they are related to the findings of this project. For more comprehensive and exhaustive information, the reader will be referred to specific references.

Levitt et al. (2004) stated that DBT could be a useful way to address both ED and SH. Being devised for individuals who present with difficulties that have been categorised under the term of BPD, DBT has a specific focus on targeting SIB through the dialectic of balancing acceptance and change and extreme thoughts and behaviours. It can be argued that the various elements of DBT, amongst which individual therapy, skills training components, telephone check-in and team consultations, provide added value compared to some of the unidimensional approaches mentioned before.

Furthermore, given that the conceptual framework of this model, designed to target a multitude of complex difficulties, is based on a dialectical vision of the world, ambivalence and reluctance towards change and recovery are recognised and accepted as a matter-of-fact. The notion of dialectic itself inherently recognises that `reality_ encompasses opposing, dynamic forces: a thesis and an antithesis. Hence, it is unanimously accepted that learning new skills that lead to recovery can feel a threat to one's own identity and personal integrity, especially when these two are maintained by these difficulties (Bateman & Fonagy, 2007). This is extremely relevant to the population in question, whereby the ED, `the thin-ideal_ or, indeed, being a `cutter_ become one's own identity.

This non-judgemental stance in relation to change can, in itself, be extremely powerful to abate possible power struggles that might arise in the therapeutic alliance as a result of an over-emphasis on stopping the enactment. Furthermore, this attitude appears to be crucial in order to foster a positive, compassionate and constructive environment towards change. Indeed, an accepting and compassionate standpoint is particularly relevant to the difficulties explored in this thesis, as ED and SH is often associated with shame and guilt feelings.

By adopting an open, non-judgemental, dialectical stance that focuses both on ambivalence-validation, as well as behavioural change, clinicians convey the message that that ED and SH, for example, are significant, valuable and adaptive coping mechanisms for the individual. By combining techniques for emotional regulation, distress tolerance and mindfulness practices, DBT addresses one of the core difficulties associated with a lack of a mentalising stance, namely affect regulation. Hence, it appears that the model does not only concern itself with the elimination of the SH behaviour, but it also acknowledges that this is not possible unless other skills are first developed. This can be referred to as the `suitable grounding_ mentioned in the previous section, whereby it was argued that in order to successfully target the means by which this client-group appears to express its own emotions, it is crucial to provide alternative ways to deal with overwhelming affect.

Furthermore, the emphasis and explicit use of the therapeutic alliance as the basis of treatment and vehicle of change in its own right addresses another important aspect of the client-group taken into consideration: the lack of a `secure base from which to explore the world_ (Bowlby, 1960). It is arguable that, by highlighting the great importance of the therapeutic relationship, DBT somehow attempts to address the early life environment's failings characteristic of these client-groups. Lastly, the use of mindfulness as a core skill endeavours to help individuals to balance states of mind and achieve a better synthesis of conflicting emotions.

Undoubtedly, there are several innovative and effective aspects of this model. However, it has been claimed that its underlying philosophical position and view of the world is inherently

different from the developmental view of the mentalising theory, which is, instead, informed by empirical attachment research (Bateman & Fonagy, 2007). The extensive literature reviewed so far suggests that in the context of significant mentalising failure and lack of second-order representations of internal states, such as those found in the ED and SH population, emotional dysregulation comes from an inability to experience a sense of 'self' as agentive (Bateman & Fonagy, 2007; Slade, 2005), rather than by skill deficit.

More specifically, DBT views the characteristic difficulties with affect regulation as arising from mismatches between internal experiences and external responses (the invalidating environment). This arguably prevents the child from developing affect-regulation skills. Instead, the bulk of research discussed so far argues that affect-regulation difficulties appear to originate from a failure in mirroring which causes a breakdown in the progression from primary to secondary order representations (Gergely & Unoka, 2008; Fonagy & Target, 1997; Slade, 2005). Bateman and Fonagy (2007) speak of the inaccessibility of the experience of feeling regulated (p. 122), rather than a deficit of regulation. In conclusion, despite the philosophical framework of DBT being appealing and, indeed, compassionate and accepting, it can be argued that its conceptual basis are less grounded in evidence base compared to the roots of mentalising theory.

Although it can be argued that the differences outlined above are more theoretical in nature, these consequently translate into practical implications in terms of treatment. The DBT philosophy converts into interventions that focus on dialectics, motivational issues and skills-development. Instead, the current findings suggest that interventions ought to concentrate on the exploration of the 'self-structure', on the development of second-order representations (Bateman & Fonagy, 2007) and on the rehabilitation of the mentalising function (Skarderud, 2007). Interestingly, current trends in the field of DBT suggest that MBT might provide some new and effective moves to DBT (Swenson & Choi-Kain, 2015) which might make it a meaningful addition to DBT (Brune, DiMaggio & Edell, 2013).

Whereas the DBT model concentrated on skills training and behavioural change, the present findings suggest the need for more emphasis on interpersonal processes and how these might reflect underlying internal processes (Bateman & Fonagy, 2007). Indeed, a significant lack of a mentalising stance in the population in question arguably advocates the need to understand one's own mind, and one's own mind in relation to others before practical skills can be acquired. It can be speculated that the mechanical application of new coping skills will eventually fail if the core issues behind this lack is not addressed appropriately. In addition to this, it can be argued that the customary use of contracts, reinforcements and adverse contingencies in DBT goes against the understanding of the implications that come from functioning in the teleological mode.

The literature has emphasised how, lacking an internal emotional vocabulary, enactments appear to be the only way this client-group is able to communicate their inner states. Hence, it can be imagined how helpful it might be to 'punish' someone by discharging them from treatment for, for example, failing to maintain the agreed weight, or struggling to stop bingeing, or indeed for engaging in SH. The current findings suggest, instead, that reflecting on the message and meaning that the act conveys might be a more compassionate and constructive approach.

Furthermore, it has been argued that severe impairments in mentalising capacity, such as those found in the client groups of this research, result in an inability to access one's own mind, especially in times of distress (Bateman & Fonagy, 2007). This means both an inability to project oneself onto the future and to imagine and reflect on one's own emotional state in different contexts at any given time. Fluctuating mentalising capacity means that an individual who agrees to a contract at one point might not have the same competence in a different situation. As a result, they might hastily and casually agree without really understanding the implications (Bateman & Fonagy, 2007). Bateman and Fonagy (2007) warn against draconian contracts and they claim that confronting behaviour with behaviour is likely at times to be traumatic, rather than therapeutic and the very problems that are the focus of treatment can become the same ones that result in discharge.

Of note, is also the a common underlying phenomenological issue in both individuals who present with ED and SH is sensitivity to rejection and fear of abandonment (Bateman & Fonagy 2007; Farber, 2007; ; Skarderud, 2007; Steiger & Israel, 1995). It has been largely documented in the literature how this client group enters the therapeutic encounter with expectations and extreme anxiety that they will be rejected. This was also exemplified in the 'youtube' video clip (Mentalization Based Treatment- Dr. Bateman, 2012) mentioned in the Introduction section of this thesis in which Alice anxiously relates her terror about being 'fired' by the people who she deems significant. Hence, it appears crucial to reflect on how discharging clients for the very problems that they are seeking help might collude with their expectations that they will be rejected.

Specific Treatment Approaches. Specific Treatment Approaches for the Management of Concurrent ED and SH: Integrative Cognitive Therapy (ICT) and Self-Regulatory Approach (SRA).

In order to address the lack of development of accessible psychological approaches for concurrent difficulties, Wonderlich et al. (2002) devised a specific treatment for individuals who present with BN and concurrent SH. This model, named ICT, combines elements of CBT in regards to the development of core beliefs about the 'self' and 'others' with the idea that the extent of the discrepancies between one's own cognitions and experience of the 'actual self' versus the 'ideal self' determine the degree of negative affect towards the self, which arguably often translates into appearance-related concerns. The model further claims that, in order to cope with negative feelings, the person develops dysfunctional coping strategies. Amongst those: ED and SH.

ICT emphasises the role of interpersonal patterns and schemas, emotional reactions and cultural factors, which are deemed central by the mentalising theory. Additionally, similarly to the literature on reflective function, ICT acknowledges core difficulties around one's own conception of the 'self', albeit not in respect to its development as the other counter-part. In this regard, it is significant to note that Phase Three of ICT treatment focuses on affect regulation. The ICT approach suggests that, given the strong, often overwhelming emotional reactions that this client-group presents with, therapists ought to help clients identify and label confusing emotions. This is arguably a highly mentalising stance as evident in current MBT approaches (Bateman & Fonagy, 2007).

Furthermore, in the last stages of ICT treatment, the model concentrates on helping clients develop an awareness of unhelpful patterns, modify the underlying unconstructive beliefs and create new, more functional patterns of relating. This is also partly congruent with a mentalising stance and with a mentalising-based focus of treatment. It has been pointed out that individuals with poor mentalising capacity tend to show distinctive relationship-patterns which are usually repeated in the therapeutic alliance (Bateman & Fonagy, 2007). Indeed, an important aspect when working with individuals who present with impaired reflective functioning is to highlight these patterns as the likely relational context in which difficulties with mentalising will occur more predominantly.

Following what was discussed above, it appears that ICT has some valuable features. At the same time though, it can be argued that the model is quite broad. It can be claimed that, although it offers an explanation of how the symptoms might arise, it does not address the issue of why some individuals develop these particular symptoms, rather than different ones. The question of why some people develop ED and/or SH, rather than depression or schizophrenia, is

unanswered. Above all, this treatment is at an early stage of research and currently no evaluative studies are available.

The last enterprise that ought to be reviewed in respect to the current findings is that of Levitt et al.'s (2004) study, Self-Regulatory Approach (SRA) to the treatment of concurrent ED and SH. Although it can be argued that the list of effective approaches has by no means been exhausted, the reader is reminded that only treatments that had a direct connection to the findings of the current project have been considered. The SRA was chosen because, as extensively discussed in the literature review, issues concerning the regulation of affect are central to both ED, SH and the literature on mentalising.

The SRA model focuses on the function of both ED and SH symptoms alike so as to provide a sense of control and consistency through self-regulation of affect. Given that the approach acknowledges the adaptive value of the symptoms, their elimination is not SRA explicit focus of treatment. Instead, it is accepted that clients will make therapeutically unpopular decisions, including continuing to SH for extensive periods of time whilst in treatment (Levitt et al., 2004). A key element of the interventions is, instead, the therapeutic relationship, which is seen as crucial in order for clients to experience a sense of empowerment, competency and mastery.

The therapist ought to continuously empower the individual to make choices and to accept responsibilities, rather than to simply react to affective states. To this effect, the concept of 'position' is employed. Similar to Cognitive Analytical Therapy's (Ryle, 1990) notion of reciprocal roles, the notion of 'position' encourages clients to become aware of whether they take up the role of a 'victim' who has no control, or whether they behave as a 'survivor'. The latter holds responsibility. Nevertheless, although attention for interpersonal dynamics is indeed a crucial aspect of any effective approach, the findings of the current project suggest that this might not be so straightforward with individuals who present with impaired mentalising ability. The concept of reciprocal roles entails that one has a symbolic representation of one's own/someone else's mind and that the individual has the ability to 'play' with those concepts.

Another critique of the SRA model relates to the concept of responsibility, which is reportedly clearly defined at the beginning of treatment for both client and therapist (Levitt et al., 2004). Despite acknowledging the importance of this point, it can be argued that the literature discussed so far seems to advocate that the notion of responsibility for one's own actions cannot easily be conceived by people who operate in the pretend mode of functioning.

Lastly, similar arguments to the ones advanced when discussing DBT's skill training should also be considered. It is universally accepted that individuals who present with ED and SH struggle with affect regulation. However, it is arguable that teaching self-regulating skills

without truly addressing this deficit's core issues would not have a long-term impact. So, although this model can be praised for its compassionate and de-pathologising stance, and for its perspective that the client is ultimately seen as the expert, it appears to overlook the core issues behind ED and SH.

To summarise, it can be argued that the above approaches, although perhaps effective with individuals with a normal capacity to think and reflect on mental states, fail to take into consideration this client group's difficulties with mentalising. The above approaches, and traditional psychotherapies at large, assume that individuals are able to hold symbolic representations of internal states, which is impossible for individuals who lack the ability to mentalise. This is clearly explained by the developmental theory of the 'self'. In addition, the ability to contemplate upon and integrate both one's own and the therapist's (or others') representation of reality is a key element of the above therapeutic approaches. However, the literature suggests that integration cannot be achieved without the capacity to mentalise.

These speculations are corroborated by several studies that report virtually no increase in RF following DBT, supportive psychotherapy (Levy et al., 2006), CBT, brief psychodynamic psychotherapy (BPDT); Karlsson & Kermott, 2006) and psychodynamic treatment for BPD (Vermote et al., 2010). Shockingly, mentalising was even found to decrease in IPT (Karlsson & Kermott, 2006) and in short-term psychodynamic treatment SPT (Balestrieri et al., 2015). The only approach that seems to have a positive impact on mentalising is Transference-focused Psychotherapy (Levy et al., 2006), although it has been suggested that the positive results might be due to the latter study used the AAI as its instrument to measure mentalising. Katznelson (2014) argues that the AAI captures more stable-traits of RF, rather than the more state-sensitive aspects that are disrupted by the activation of the attachment system.

Implications for Psychotherapy

The current findings confirm that individuals with concurrent ED and SH difficulties report more severe impairments in mentalising ability, symbolic capacity and abstract thinking than individuals with ED only (Kuipers et al., 2016) and control. It emerges that there are several implications for a lack of a reflective function, symbolisation and abstract thinking. One of these is the concretisation of inner life, exemplified by a rigid, often inflexible focus on the physical world and tangible, concrete acts (Levens, 2002).

Lacking the capacity for symbolic representation and abstract thinking, emotional states become concretised, controlled and managed through the body. The body is not perceived as a metaphor, capable of symbolic communication, but rather as concrete reality (Levens, 2002; Skarderud, 2007). It follows that even intangible aspects of inner life such as mental states,

emotions, ideas, as well as relationships are de-symbolised and a direct link between those and the body is developed. As there is rigidity in terms of thinking processes, there is also rigidity and inflexibility in terms of tolerance for alternative perspectives (Fonagy et al., 2002) which translate into a deep struggle to conceive of others' viewpoints as different from one's own.

The last core consequence for a lack of a reflective capacity is the tendency to regard of one's own actions as inconsequential. Blair (1995) warns that 'even when someone can intellectually conceive of the impact of his or her actions on another person, this may be felt as meaningless, empty of emotional conviction'. As already discussed in the section 'Pre-mentalistic states of mind in ED and SH', these core implications seem to have profound implications for the therapeutic encounter and for the clients' ability to engage in 'story-making and story-breaking' (Holmes, 1999). It also appears to have crucial implications for people's ability to experience mentalised affectivity and, hence, to truly benefit from the process of therapy.

Although it has been argued that acceptance of this model does not imply a complete change in psychological approaches for the majority of clients, it has also been highlighted the importance of reappraising techniques for clients who show the developmental failures described in this thesis (Fonagy et al., 2002). It has been argued that the effectiveness of traditional psychotherapy depends on an individual's ability to consider and appreciate the difference between their own mental and affective states and their representation by the therapist (Bateman & Fonagy, 2004). Hence, it appears that an initial specific focus on the rehabilitation of mentalising function is crucial in order to avoid the inherent iatrogenic effects of current practice and to allow clients to benefit from the therapeutic process.

For example, one can also speculate on the usefulness of interventions that challenge maladaptive beliefs and cognitions with a population that often exists in the psychic mode of functioning. Similarly, one can wonder about the efficacy of interventions that conceptualise reciprocal roles, yet fail to consider the underlying reasons behind the struggle to develop cognitive, behavioural and affective flexibility. Or, yet again, the same can be said about routine interventions that focus on symptom-reduction. It is maintained that unless therapeutic approaches specifically target the lack of symbolisation and abstract thinking which is derived by the need for the development of stable mental representations and a stabilisation of the 'self', they might largely be ineffective or produce short lived, illusory changes (Karlsson & Kermott, 2006; Levy et al., 2006; Vermote et al., 2010).

In addition to this, it has been argued that there are serious consequences if therapists assume that this client-group have cognitive capacities that they simply do not have (Bateman & Fonagy, 2007). As a result, clinicians ought to be aware of the possible iatrogenic effects of the

use of metaphors, complex interpretations, focus on conflict and content when working with clients with impaired mentalising capacity (Bateman & Fonagy, 2007). For example, it has been argued that a person who struggles to recognise their inner experiences cannot benefit from being told that they feel angry. Such a comment, which will not be recognised by the recipient, will possibly be perceived as persecutory and patronising and will only add to the person's confusion and instability (Bateman & Fonagy, 2004).

In addition, it has been argued that all of the above techniques 'assume the ability to hold different mental representations in different forms at the same time' (Bateman & Fonagy, 2004). More specifically, it has been argued that metaphors and interpretations might mislead clinicians whose clients function in the Pretend mode into erroneously believing that therapy is progressing well. Whilst apparently seeming receptive to the interpretations offered, individuals who function in the pretend mode will have stripped them off of any emotional connotation and involvement (Bateman & Fonagy, 2007). In regard to this, evidence suggests that the therapeutic process appears to be productive only when there is mentalised affectivity (i.e. when the link between cognitions and emotional experiences is strong) (Bateman & Fonagy, 2007). Hence, it is arguable that the use of the above techniques with clients who operate in the Pretend mode will necessary fail to precipitate any meaningful progression in the therapeutic process and any meaningful change in the client's life.

Arguably, the opposite can also happen. Desperately searching for meaning and significance to a life that is experienced as meaningless, individuals who operate in the Pretend mode might unconditionally internalise the therapist's suggestions even if they do not fit with their experiences (Bateman & Fonagy, 2007). The results can be the further development of the alien 'self' and the precipitation of more enactments and externalising behaviours in an attempt to project the incongruent and unwanted aspects of the alien 'self'. A similar unhelpful outcome has been argued to be fostered by the classical psychoanalytic stance of the 'blank screen', which might bring about more aggressiveness and paranoid anxiety. It can be argued that, as the therapist willingly withholds any reaction, the person with impaired mentalising capacity might interpret this as a cold, rejecting and unsympathetic attitude (Bateman & Fonagy, 2007).

Further Implications for Psychotherapy: the Therapist's Stance

It is axiomatic to discuss about the therapeutic process in terms of non-specific factors common to all psychological models. Indeed, warmth, genuineness, unconditional acceptance and empathy are the core of any given healing clinical encounter. However, in order to fully appreciate the clinical implications of the current research for the client-group in question, it is important to reflect upon their early environment. Early life experiences of individuals presenting with impaired mentalising capacity appears, at the best of time, to be characterised

by the lack of a reliable other, capable of congruently representing the infant's internal states. At worst, their background appears to be characterised by an upbringing in which thinking about feelings and intentions was not safe for the infant.

As a result, it has been argued that a crucial, first step for clinicians working with individuals with impaired mentalising ability is to create a working environment in which thinking about emotions and mental states feels safe (Bateman & Fonagy, 2007). Marcinko et al. (2015) echo this by stating that the optimal therapeutic alliance ought to improve mentalising in a secure attachment relationship. Whereas this might appear simple and primitive, research discussed so far has suggested that the inherent difficulties of individuals who present with impaired mentalising abilities tend to cause them to distort their subjective experiences. Consequently, it can be very difficult for this client-group to find their own mind in the mind of someone else, if adjustments to therapists' working styles are not made.

Furthermore, in addition to this, it also appears that this client-group's interpersonal difficulties make them intensely vulnerable to being drawn to and prone to promote social environments that reinforce the alien part of the 'self' that they desperately wish to get rid of. Hence, if projective identifications and enactments are not understood and withstood by the therapist and unhelpful reciprocal roles are recognised, a safe and stimulating environment that fosters the development of a mentalising stance cannot be achieved. In this regard, Bateman and Fonagy (2007) suggested that it is the experience of being understood that fosters that sense of security that creates the necessary basis for affect exploration. The researchers claimed that it is the therapist's role to encourage this by continuously trying to identify and label mental states.

Using active questioning and constantly monitoring whether their observations are relevant and accurate to the client's internal state, therapists ought to adopt a 'not knowing stance' (Anderson & Goolishian, 1992). This position, which implies a curious, playful and naive attitude, ought to translate into open and genuine inquiring with the aim of learning from the client. A not-knowing stance arguably communicates that mental states are blurred and ambiguous and that the therapist cannot know what is in the client's mind anymore that they can. Ultimately a not knowing stance conveys humility on the part of the therapist whose initial, primary role is arguably to provide that congruent, yet marked mirroring that appears to have been missing from this client-group's early years.

It seems crucial that the clinician develops, constructs and deconstructs images of the client's mind that are congruent enough to the client's emotional states to be related by the client to their own experiences. At the same, it appears imperative that these representations are different enough from the client's internal states to foster the understanding that these are tentative, alternative perspectives. It has been argued that by accepting the client's enactments

whilst failing to collude with the client's projective identifications, the mentalising therapist remains close to the client's true mental states, which he consistently ought to try to recognise and verbalise (Fonagy et al., 2002).

It is arguably through this process of 'recognition', during which the client might come to experience themselves as a thinking and feeling being for the first time ever, that they will eventually come to develop and, in time, to reinforce a secure IWM. It is also arguably through the therapist's mirroring and mentalistic stance that continuously creates and recreates mental representations that, over time, the client will be able to consolidate a coherent sense of 'self' (Bateman & Fonagy, 2007; Gergely & Watson, 1996). The literature has further suggested that, as the person experiences themselves as a coherent putative being, their capacity for reflective function and their curiosity about the Other's mind will also increase (Bateman & Fonagy, 2007).

As discussed before, it has been argued that a coherent sense of 'self' is crucial for an individual's ability to reflect upon the 'self' and the object and for the development of a symbolic capacity. Indeed, it appears that it is the latter that allows the arrangement of different representations of 'selves' into an organised, coherent and meaningful narrative (Karterud & Bateman, 2011).

Given what has been considered so far, it can be argued that the more severe the mentalising impairment, the more important and through the focus on the rehabilitation of this function ought to be. It has been suggested that individuals with impaired mentalising capacity are particularly vulnerable to the iatrogenic effects of psychotherapy that activate the attachment system (Bateman & Fonagy, 2007). In this regard, the reader is reminded that psychotherapy is inherently designed to stimulate the attachment system. Furthermore, although it is true that the majority of mental difficulties involve some sort of negative evaluation, it is also true that individuals with a compromised reflective function, who live in the psychic mode, experience those negative evaluations with the full force of reality (Bateman & Fonagy, 2004).

Mentalization-Based-Therapy

Skarderud (2007b) warns that it is only through the process of development of an interpretive capacity that concretised metaphors can progress into linguistic ones (Searles, 1962; Shaly, 1987, as cited in Skarderud, 2007b). Hence, it can be hypothesised that it is only through the symbolic growth of the capacity to conceive of mental states and to reflect upon those that enactments will cease to fulfil their function. Otherwise, it can be speculated that clinicians will only continue to see symptoms-substitution or short-term improvements. The correspondent mentalistic therapeutic stance has, more recently, been systematically organised around a

therapeutic approach called Mentalisation-based Therapy (MBT) (Bateman & Fonagy, 2004, 2007). A full description of the model is beyond the scope of this project and the reader is referred to the above authors for a comprehensive account of MBT's features and treatment focus. However, for unanimous understanding, few core underlying elements will be highlighted.

The model, whose primary goal is the exploration of the person's mind, aims to increase an individual's ability to understanding their own and others' mental states. Although it is arguable that most psychotherapies do that, MBT differentiates itself for its specific focus on the enhancement of mentalising itself and for its attention to other's mental states, as well as one's own (Skarderud, 2007). Clinicians are encouraged to keep their focus on the affect at all times, rather than on the behaviour and to target the immediacy of the moment in a way that the client can connect to subjective 'reality'. This would diminish the risk of operating in the pretend mode of functioning. The focus is on creating a dialogue, which identifies emotions and places them in context. Attention is given to the mental state and how the mind struggles to understand itself. In this context, the link between the affect and the action, although implied, is not explicitly addressed early in therapy. Had the individual been able to make this connection, or indeed to talk about the emotional state, or the meaning behind the enactment, they might have not needed to do it (Bateman & Fonagy, 2007).

It can be argued that maintaining this therapeutic stance throughout treatment will eventually enable the client to develop a mental representation of their own inner experiences. Developing a symbolic capacity will arguably allow the client to move away from the physical to the more abstract realm of reality and will debatably reduce the confusion and the loss of control that the individual may feel when faced with strong affect. It can also be hypothesised that this, in turn, will reduce the need for mental states to be managed through the body. The literature reviewed suggests that emotional states, will, in time, be recognised and differentiated from those of others, included those of the therapist (Bateman & Fonagy, 2007). This will arguably foster the awareness of existing as a separate being, with inner and outer boundaries.

Despite the approach having been traditionally and successfully associated with the treatment of BPD (Bateman & Fonagy, 1999, 2008, 2009, 2013), it has more recently been suggested and applied to the care of ED as well (Allen et al., 2008; Balestrieri et al., 2015; Robinson et al., 2014; Skarderud, 2007). It is arguable that a model developed for a specific clinical population cannot simply be used for the treatment of another population and, indeed, adaptations have been made to the original protocol. At the same time, due to phenomenological similarities between individuals presenting with ED and individuals presenting with SH, as well as the significant comorbidity between the pathologies, it might be useful to think

transdiagnostically. In particular, it has been suggested that it appears to be crucial to focus on the concept of `embodiment_': the embodied mind and the embodied body (Skarderud, 2007).

Although in its early stages of development, research on Mentalisation based therapy for Eating Disorders (MBT-ED) has grown and expanded in a multi-centre project in Norway (Skarderud, 2012) and in one of the leading clinical centres for the management and research of ED in London (South London and Maudsley NHS, 2011). In addition, Robinson et al. (2014) have undertaken a randomised controlled trial investigating the use of MBT-ED for the treatment of ED complicated by symptoms of BPD. Although analysis on the data collected by the NOURISHED study is continuing, preliminary results suggest that MBT-ED reduced BPD symptoms and that the approach reduced some ED symptoms such as weight and shape concerns more than Specialist Supportive Clinical Management (SSCM-ED) (Robinson, 2015). These positive results are further confirmed by Balestrieri et al. (2015) who concluded that, when compared to a psychodynamic-oriented well-established treatment for ED, both treatments led to considerable improvements. At the same time, the MBT-ED group had slightly less drop-out rates although this difference was not statistically significant.

Thinking Trans-diagnostically: Older and Newer Therapeutic Enterprises.

The literature has suggested that the infant's experience of an inter-personal exchange in which they find their own mind in the mind of the caregiver is fundamental in order for the growing child to experience separateness and to develop its own identity. In this model, a key idea seemed that of `feedback_', how first-order representations looped back into the interaction in order to create secondary-order representations. The notion of feedback loops also seems to be crucial in the therapeutic alliance.

Not only the therapist continuously creates representations of the client's mental states and `gives them back_' in ways that are tolerable for the client to bear. Above all, the clinician ought to model reflectiveness (Bateman & Fonagy, 2007). For example, the mentalising clinician ought to use direct and indirect feedback from the client, as well as other relevant information, in order to assess their understanding of the client's experiences. As a result of this new information, their insight might develop, or indeed change altogether. Bateman and Fonagy (2007) emphasise the importance for the clinician to make this last point explicit with the client in an attempt to demonstrate that having one's mind changed by another mind is constructive and developmental, rather than humiliating.

The notion of feedback as described by Gergely and Watson (1996) has reminiscences of ideas derived from cybernetics, the study of how information-processing systems are self-regulating, controlled by feedback loops (Weiner, 1961 as cited in Dallos & Draper, 2005).

Indeed, it has been suggested that first-order representations loop back into the interaction in order to create secondary-order representations and that the therapist's reflectiveness allows them to use the information gathered from the client in order to update their understanding. Hence, it seems appropriate to compare these concepts to the cybernetics' notion of feedback loops as the mechanisms through which information is returned to the system and exerts an influence on it (Family Solutions Institute, n.d.). Cybernetics' concepts, initially driven by military applications in the Second World War, soon unfolded and were swiftly applied to family communication patterns (Bateson, 1972) under an umbrella-term of 'systemic therapy'. In this regard, the recent literature has confirmed that links between mentalising and systemic principles are obvious (A sen & Fonagy, 2012; Donovan, 2014) and mentalisation-based treatment for families (MBT-F) has now become a well-established therapeutic approach.

For example, systemic approaches highlight the interpersonal nature of problems, which is in keeping with the inter-subjective viewpoint of mentalising theory. In addition, systemic approaches focus on the larger context in which symptoms usually develop. This can be a family, or significant others, or the larger context that is seen as part of the solution, rather than the 'problem'. Given the bulk of information on attachment issues and the inter-personal nature of ED and SH difficulties, systemic principles seem particularly relevant to this discussion and they appear to complement the propositions of the developmental theory of the self and the literature on mentalising. Whereas the latter two address the origins of mentalising difficulties and an initial focus of treatment, the former offers important contributions.

In particular, Boscolo and Bertrando (2002) highlight few reference points which appear to be relevant when working with individuals presenting with ED and SH. Among those are the notion of attachment, belonging, space, power, gender and time. The notion of attachment has been extensively covered. Indeed, it is universally agreed that if someone presents with an ED and SH, they did not form sufficiently healthy attachments in order to build trust and self-reliance and did not achieve an adequate balance between dependency and separation needs (Lemberg, 1999; Levitt et al., 2004; McAndrew & Warne, 2005; Suyemoto, 1998). In addition, it can be argued that a major task for individuals presenting with AN in particular, is to develop a sense of belonging by negotiating separateness and individuality with a secure attachment. This will arguably allow the person to feel separate, yet connected within their own personal space.

Indeed, the notion of personal space is highly significant for the population of this study, in that issues of proximity and distance are crucial in individuals who present with ED (Boscolo & Bertrando, 2002) and in individuals presenting with SH (Farber, 1995). These issues are also inextricably connected to the notion of attachment. Indeed, when a person feels safe within a secure attachment and within one's own personal space, they have no need to use

dysfunctional power to control their distance from others, either by keeping them away, or by developing an enmeshed relationship. Power in healthy relationships can be relinquished because the individual knows that they are safely attached.

Closely related to the notion of power is the concept of gender. Gender ought not only to be taken into consideration for the higher incidence and prevalence of ED and SH in the female population. Instead, it can be argued that the concepts of belonging, space, power and gender ought to be contemplated within a post-modernist, systemic framework. This emphasises the dilemma and power struggles that some individuals (especially women) experience in society as a result of the traditional `pull_ to belong to conventional roles and responsibilities against the more recent `push_ towards newer identities¹⁰.

Lastly, the notion of time as described by Boscolo and Bertrando (2002) has also been widely used in psychology to explain mental distress as a loss of coordination of temporal paradigms. Whereas it can be argued that people who present with depressive symptoms tend to be projected towards the past, it can be suggested that people who display features of anxiety live perpetually in the future. Instead, time can be said to be split in psychosis, or fixed in post-traumatic disorders (Boscolo & Bertrando, 2002). In this regard, it has been argued that the difficulties associated with AN can also be regarded as a break-down of the harmonic development of time. In particular, these issues have been linked to `the slowing-down in the tempo of individual development_ (Boscolo & Bertrando, 2002, p. 96).

Following these reflections and proposed associations of ED and SH to `transitional objects_ (Farber, 1997; Favazza & Conterio, 1988) and substitutes for the comfort and the soothing that was not available from others, the current researcher wonders whether it is possible to interpret a SH act, or indeed a binge, or a purge, as being stuck in a particular moment in time. Namely, the time that Fonagy et al. (2002) describe as a pre-symbolic.

The effectiveness of systemic therapy for the management of ED in adolescents was recently confirmed in a review (Carr, 2009, 2014). In addition, the idea of clinically combining the theory and the clinical roots of mentalising and systemic principles has recently been advanced and applied in therapeutic settings by Fonagy et al. (n.d) in Mentalization-Based Treatment for Families (MBT-F) and by Midgley and Vrouva (2012). The former approach, previously known as Short-Term Mentalization and Relational Therapy (SMART) (Fearon et

¹⁰ The researcher is aware that she is not doing justice to the multitude of crucial issues arising as a result of these reflections. Matters such as that of classism, sexism, racism, dominant ideologies in society and their impact on the social structure and the environment are at the forefront of the researcher's philosophical and clinical outlook. However, due to space constriction, pragmatic choices had to be made as to what to discuss. Nevertheless, this does not reflect the researcher's priorities.

al., 2007), is currently a working process displaying encouraging significant outcomes (A sen & Fonagy, 2012). MBT-F emphasises the importance of including significant others in the process of therapy, whether conjointly, or separately. Given the interpersonal nature of ED and SH, this seems particularly important.

Regarding this, the literature revealed that adolescents ED treatments that encourage parents' participation are the most effective, even if the significant others are not in the same room with the young person (Cottrell & Boston, 2002). Moreover, extensive empirical evidence supports the utmost importance of healthy social networks for the long-term recovery of individuals who present with psychological difficulties (Leff & Vaughn, 1985; Rabstejnek, n.d.). As a result of these findings, it seems important to involve significant others in treatment, especially when working with young people who appear to be over represented in the population of this study. Indeed, the utmost importance of the larger environment was further pointed out by Suyemoto (1998) in his 'environmental model of self-harm'.

Lastly, it can be argued that the need to adopt a 'Bio-Psycho-Social approach' (Engel, 1980) to the understanding and treatment of mental distress should be augmented by a similar attention to the cultural, political and economic context in which the individual is embedded. Truly, individuals are extremely complex presentations which can also be described as social, political, ethical beings, as well as biological and psychological (Larner, 2004). In this regard, to claim that personal, relational and contextual factors such as culture, gender, narrative and family are irrelevant because not amenable to prediction and control ignores what is real in people's lives, a stance that is not curious or scientific (Larner, 2004).

Importance of the current findings for Counselling Psychology. While it is arguable that the current findings have significant implications for psychology at large, this thesis has important implications for the field of Counselling Psychology in particular. The recent interest of the Counselling Psychologist journal on the issue of EDs and its encouragement to deepen a working knowledge of these disorders has already been mentioned. In addition, a current article published in the Counselling Psychology Review emphasises the need for Counselling Psychology to join in to wider research areas and to be mindful of challenges and opportunities presented by the current and future economic climate (Vermes, 2014).

Vermes (2014) speculates on the requirements that will allow the discipline to flourish in the future and argues that 'it's time to bring down some of our outdated professional fences [...] and think bigger'. She encourages doctoral programmes to engage in multi-site, long term, larger studies and to seek collaboration, team work and project developments with other mental health professionals. The present researcher argues that this study meets these criteria by sharing its data with a larger, worldwide project for the validation of the RFQ. By co-operating with

leading experts on the field of psychoanalysis, attachment, psychiatry and so-forth, the current findings position themselves and Counselling Psychology on the cutting edge of contemporary challenges and opportunities. Moreover, the present thesis will arguably introduce a Counselling Psychology perspective to state of the art enterprises.

Furthermore, it is arguable that this thesis offers significant contributions to the field because it places itself in the context of 'blending leading-edge qualitative methodologies into big-time quantitative endeavours' (Vermes, 2014) as it supports significant qualitative findings from the discipline (Spivack & Willig, 2010). The literature reviewed so far and the current findings seem congruent with the reports from Spivack & Willig's (2010) study in which participants reported a split sense of self. In line with the current results that support the presence of pre-mentalistic states of mind in individuals who present with ED, the participants describing their inner world as 'surreal, confused and confusing' (Spivack & Willig, 2010). Above all, the partakers' accounts that therapy was too focused on the body, but not the mind, are in line with what suggested so far.

Lastly, this study offers significant contributions to Counselling Psychology because it meets the core principles of the field as described by Cooper (2009). Moreover, by advocating a transdiagnostical approach in which power and other wider factors are taken into account, the post results recommendations fit in with Counselling Psychology's social justice agenda that advocates empowerment of the individual, as well as active confrontation of injustice and inequalities (Kagen et al., 2011). This point and all the others mentioned above are arguably significant contributions to the field.

Limitations and strengths of the study.

Recruitment and sampling. The researcher had originally planned to recruit participants awaiting treatment at a renowned NHS site specialised in treating individuals with ED. The choice to target people prior to therapeutic interventions was made in order to reduce any possible confounding effect of therapy on mentalising. Nevertheless, following difficulties recruiting enough participants and following reflections on the literature that confirm that engaging individuals with EDs in research can be problematic (Tierney et al., 2010) and that extending recruitment possibilities is an option (McDermott et al., 2004), a pragmatic decision was made with the research supervisor to extend the recruitment process also to individuals already in treatment. It was also decided to start recruiting through other avenues. Hence, ED charities and associations were approached. However, when recruiting through the NHS, screening according to the inclusion/exclusion criteria was thorough. Instead, when individuals completed the survey online, the researcher had less control over initial screening.

As a result, 15 people who completed the test online did not meet the SCOFF threshold and had to be excluded from the analysis. It is questionable whether they did not meet the screening baseline was due to their not having an ED. Bearing in mind that anyone who feels that they struggle with eating-related difficulties can access support through the associations, another possibility might be that these people suffered from eating-related psychopathology, but not severely enough to warrant detection according to the criteria used for this specific study. Furthermore, the SCOFF, used to screen for EDs addresses core features of AN and BN (Morgan et al., 2000). It is questionable whether the participants who did not meet the SCOFF threshold presented with other ED, such as BED, OSFED or UFED, which might have not been detected.

Indeed, people with the latter eating psychopathologies display less severe symptoms than individuals who present with AN or BN. Although the researcher opted on the side of caution, hence excluding these participants, it can be argued that the heterogeneity of the sample within the general diagnostic criteria of EDs might have been compromised. Should this be the case, then it can be argued that the current study might not have shed light on mentalising abilities of all individuals suffering from eating related difficulties. Furthermore, although this cannot be guaranteed for the online sample, it is important to highlight that in the NHS one, those with more severe symptoms and in-patients were not approached due to ethical issues.

A nother issue worth considering in relation to the sample is the nature of the study itself and that recruitment was carried out mainly through the internet and that participation was entirely voluntarily. Whereas it is absolutely imperative that people are not pressurised to take part in research, it is important to reflect on that this might have impacted on the typology of the participants, creating a sampling bias. Indeed, the nature and length of the questionnaire might have attracted people who were interested in the subject, who were more psychologically minded, as well as those whose psychopathology might not have been as severe. Furthermore, because recruitment happened mainly online also meant that all those individuals who do not typically use the web have been precluded from taking part.

Worth noting is also that nine people had to be excluded from the control group due to scoring above the SCOFF threshold for detection of ED. One explanation for this might be that eating psychopathology is more common in the general population than was considered. A nother explanation could be, instead, the false-positive rate of 12.5% found in the literature (Morgan et al., 2000).

Measures. Issues around the choice of the RQF as a not-fully validated measure have already been discussed in the method section and will not be repeated here. However, another issue worth mentioning includes the RFQ scores measure both a person's ability to mentalise, but also an individual's insight into their ability to mentalise. One can speculate whether insight might vary across different conditions and severity of psychological difficulties. Indeed, the literature has often reported that emaciation and the severity of AN, or indeed personality disturbances, can be associated with poor psychological insight (Bateman & Fonagy, 2004; Greenfeld, Anyan, Hobart, Quinlan, & Plantes, 1990).

Whether this might have affected individuals' responses and subsequent performance on the test is worth bearing in mind when conducting future research. Moreover, the issue of psychological insight is extremely pertinent when talking about mentalising. Whereas some vulnerable individuals might ordinarily display adequate levels of mentalising, this capacity appears to collapse in the face of stress, especially attachment stress (Allen et al., 2008; Bateman & Fonagy, 2004). It is worth considering that in this particular study, stimuli were administered outside any controlled therapeutic intervention related to the research. Hence, one can wonder whether in different circumstances, especially those that stimulate and intensify attachment emotions and the attachment-system, participants might have performed differently. It has also been questioned whether mentalising abilities might actually change on the basis of whether the emotion mentalised is positive, negative, or neutral (Rogoff, 2011).

Further, some authors have argued that the theoretical framework in which mentalising is embedded is not yet to be seen as a fully developed theory (Liljenfors & Lundh, 2015). Instead, the authors emphasise the ongoing development of this framework, and emphasised that, at the present stage, the theory of mentalising should not be expected to be complete and free from inconsistencies. A discussion on inconsistencies and points that deserve further consideration in the mentalising theory has already been presented in the critical appraisal review and will not be repeated here. The reader is referred to that section for a reminder.

In addition, one can retrospectively reflect on whether a different, more thorough scale for assessing eating psychopathology might have been more appropriate, especially in the light of expanding recruitment strategies. Indeed, the choice of using the SCOFF was based on the initial idea that recruitment would have taken place in ED specialist units where people present with formal diagnoses. To change measure once the study had started would have been unfeasible within the constraints of this study. Nevertheless, it is arguable whether the choice of a different, more robust screening measure would have shed light on and made a difference to the number of participants that have been excluded by the analysis.

Additionally, the question added to screen self-harmers, 'During the past week have you deliberately hurt yourself [...]_' also deserves consideration. The strict temporal criteria set (the past week) might have precluded the inclusion of many self-harmers who nevertheless had not engaged in SH within the previous week. Hence, a broader inclusion criterion, such as three, or six months, would have perhaps been more appropriate and increased the SH sample size.

Lastly, the choice of self-reported measures is in itself a limitation to any study as it can be argued that these might not be as accurate as objective tests. Tiredness, interest, bias, commitment, social desirability effect, amongst many other factors can affect individuals' responses. In this regard, the length of the questionnaire might have precluded some individuals from taking part. Instead, the 'social desirability affect_' was addressed by the RFQ through the use of polarised, reversed and median scoring questions. Ultimately, when choosing questionnaires, it is always a balance and a trade-off between accuracy and practicalities such as time constraints and recruitment difficulties, amongst other factors. This holds exceptionally true for trainees.

Strengths. At the same time, the current research has a number of strengths which are worth mentioning. First of all, the timing of the study. Indeed, this project comes at a time when research on mentalising and on the RFQ in different populations has only just started. Hence, it is hoped that this thesis will play a role in expanding the knowledge of these concepts. It is also hoped that the study will contribute to the understanding of mentalising functions and ability in different populations and more specifically, in the researched client-group. To the researcher's knowledge, this is one of the first studies to shed light on a very complex, yet under-researched relationship that is not usually disclosed by clients (Levitt et al., 2004). The only comparable study carried out in France (Badoud et al., 2015) looked at the relationship between mentalising and SH in a community-sample.

In addition, the criteria used to measure SH were quite narrow, excluding suicide attempts, overdosing and indirect self-harm. Hence, it can be argued that this contributed to highlighting a picture of a 'purer_' relationship between ED and SH. In addition, participants came from different countries (established by glancing over the ID website-addresses of the partakers) which suggests that the relationship ED/SH cuts across geographical boundaries and it is fairly culture-free, implying some 'universal_' association. Another important point is that this project is contributing to the validation of the RFQ in individuals presenting with ED.

Future research. Given that this is one of the first studies of its kind, the importance of follow up studies appears self-evident. It seems crucial to replicate the current findings in order to gather more data on this client group. Furthermore, particular attention could be given to exploring mentalising differences between adolescents and adults within a clinical population in

order to investigate whether there might be differences in terms of RFQc/u subscales. In addition, given the higher comorbidity rate found between BN and SH, compared to AN (reportedly 33% and 22% respectively (Cucchi et al., 2016), and that individuals with BN display significantly lower mentalising abilities compared to participants with AN (Wilshire, 2011), it appears that people who present with BN engage more in SH and exhibit less reflective functioning skills. Hence, further research could concentrate on ED subgroups and explore whether, for example, individuals presenting with BN and concurrent SH display less mentalising skills than those without SH. The same could be investigated in AN groups.

Thanks to the widespread availability of the internet and that this technology breaks down geographical boundaries, participants completed the questionnaires from all over the world. The possibility of comparing mentalising ability in individuals presenting with ED with and without concurrent SH cross-countries seems important. In addition, given the complex relationship between mentalising and the related concepts described in the Introduction, the possibility of further prospective studies that take into consideration the interaction of potential mediating factors seems crucial (Jewell et al., 2016). In particular, future studies ought to clarify the relationship between attachment, mentalising and affect-regulation. Jewell et al. suggested the possibility of case-control study designs in which individuals are matched for level of eating pathology, but differ on mentalising and attachment in order to investigate the impact, if any, of each factor.

Brief Summary and Conclusions

This study aimed at investigating mentalising differences in individuals presenting with ED with/without concurrent SH. A control group was also added. Indeed, hypotheses were supported as individuals who presented with concurrent pathology reported less reflective function than individuals who presented with ED only. In addition, both clinical groups reported significantly less mentalising ability than the control. Given the bulk of empirical evidence reviewed in the critical appraisal section of the Introduction, it seems appropriate to be positive about the development and clinical application of the concept of mentalising. At the same time, the information discussed reveals the breadth of the territory surrounding mentalising and the highlights that the research on this and related topic has only just started.

Hence, further studies ought to be carried out before meaningful conclusions can be drawn. These analyses ought to replicate the current project and to further explore the relationship between mentalising, ED and SH psychopathology in different age groups and in different settings. At the same time, it seems important to remember the utmost importance of routinely screening for comorbid SH in individuals who present with ED and to reflect on the

clinical implications that a lack of a mentalising stance can have on individuals' ability to engage with the therapeutic process and to initiate change.

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Appendices

Appendix 1: Questionnaire package

Thank you very much for agreeing to fill in this questionnaire. This is about some of your own thoughts and feelings as an individual. It is for research at City University London. It requires only the marking of a series of statements – no free writing - and should take about 30 minutes to complete. Your answers will be anonymous and stored entirely confidentially. There is no need to give your name, however the following details are important. We will not use them to contact you again or pass them on to anybody else.

1). ID number: _____ 2). Today's date _____ 3). Gender: 1. Male 2. Female

4). Age in years: _____

5). Are you in a long-term relationship? e.g. married/cohabiting/in a civil partnership 1. YES 2. NO

6). To which of these ethnic groups do you feel you belong?

WHITE	MIXED	ASIAN or ASIAN BRITISH	BLACK or BLACK BRITISH
1. British	4. White and Black Caribbean	8. Indian	12. Caribbean
2. Irish	5. White and Black African	9. Pakistani	13. African
3. Any other White background	6. White and Asian	10. Bangladeshi	14. Any other Black background
	7. Any other mixed background	11. Any other Asian background	
OTHER ETHNIC CATEGORIES	NOT STATED		
15. Chinese	17. Not stated		
16. Any other ethnic category			

7). Are you:

1. Employed 2. Self-employed 3. Unemployed
4. Studying 5. Retired

8). Please choose your highest level of education:

1. Secondary school to age 16
2. Secondary school/college to age 18
3. Non-degree level vocational work-based training
4. University degree
5. University postgraduate studies (e.g. Masters)
6. University doctoral level studies (e.g. PhD)

9). Choose the group of jobs which best represents what you do. If you are not working now, choose the one that best describes what you did in your last job.

1. Modern professional occupations such as: psychotherapist/psychologist- teacher – nurse – physiotherapist – social worker – welfare officer – artist –musician – police officer (sergeant or above) – software designer
2. Clerical and intermediate occupations such as: secretary –personal assistant – clerical worker – office clerk – call centre agent – nursing auxiliary – nursery nurse
3. Senior managers or administrators (usually responsible for planning, organising and co-ordinating work, and for finance) such as: finance manager – chief executive
4. Technical and craft occupations such as: motor mechanic –fitter – inspector – plumber – printer – tool maker –electrician – gardener – train driver
5. Semi-routine manual and service occupations such as: postal worker – machine operative – security guard – caretaker – farm worker – catering assistant – receptionist– sales assistant



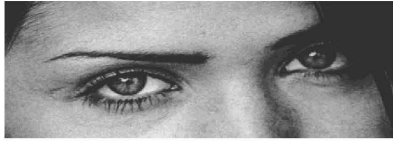



6. Routine manual and service occupations such as: HGV driver _ van driver _ cleaner _ porter _ packer – sewing machinist – messenger – labourer – waiter/waitress – bar staff
7. Middle or junior managers such as: office manager _ retail manager _ bank manager _ restaurant manager – warehouse manager – publican
8. Traditional professional occupations such as: accountant _ solicitor _ medical practitioner _ scientist – civil/mechanical engineer

10). Have you ever received personal therapy e.g. counselling or psychotherapy? 1. YES 2. NO

11). If you have received personal therapy, how long was this for? Please estimate the total time in months. If you have had several episodes of therapy, please add them together. _____ months

For each set of eyes, choose and circle which word best describes what the person in the picture is thinking or feeling. You may feel that more than one word is applicable but please choose just one word, the word which you consider to be most suitable. Before making your choice, make sure that you have read all 4 words. You should try to do the task as quickly as possible.

Most people surprise themselves by how well they do in this test. Even if you think you don't have a clue, just choose the one that 'feels' right.

 <p>1. 1. playful 2. comforting 3. irritated 4. bored</p>	 <p>2. 1. terrified 2. upset 3. arrogant 4. annoyed</p>
 <p>3. 1. joking 2. flustered 3. desire 4. convinced</p>	 <p>4. 1. joking 2. insisting 3. amused 4. relaxed</p>
 <p>5. 1. irritated 2. sarcastic 3. worried 4. friendly</p>	 <p>6. 1. aghast 2. fantasizing 3. impatient 4. alarmed</p>



7. 1. apologetic 2. friendly
 3. uneasy 4. dispirited



8. 1. despondent 2. relieved
 3. shy 4. excited



9. 1. annoyed 2. hostile
 3. horrified 4. preoccupied



10. 1. cautious 2. insisting
 3. bored 4. aghast



11. 1. terrified 2. amused
 3. regretful 4. flirtatious



12. 1. indifferent 2. embarrassed
 3. sceptical 4. dispirited



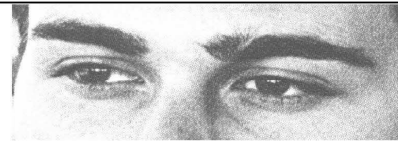
13. 1. decisive 2. anticipating
 3. threatening 4. shy



14. 1. irritated 2. disappointed
 3. depressed 4. accusing



15. 1. contemplative 2. flustered
 3. encouraging 4. amused



16. 1. irritated 2. thoughtful
 3. encouraging 4. sympathetic



17. 1. doubtful 2. affectionate
 3. playful 4. aghast



18. 1. decisive 2. amused
 3. aghast 4. bored



19. 1. arrogant 2. grateful
3. sarcastic 4. tentative



20. 1. dominant 2. friendly
3. guilty 4. horrified



21. 1. embarrassed 2. fantasizing
3. confused 4. panicked



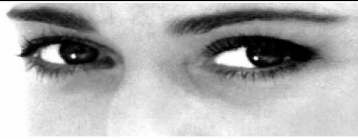
22. 1. preoccupied 2. grateful
3. insisting 4. imploring



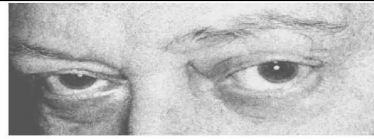
23. 1. contented 2. apologetic
3. defiant 4. curious



24. 1. pensive 2. irritated
3. excited 4. hostile



25. 1. panicked 2. incredulous
3. despondent 4. interested



26. 1. alarmed 2. shy
3. hostile 4. anxious



27. 1. joking 2. cautious
3. arrogant 4. reassuring



28. 1. interested 2. joking
3. affectionate 4. contented



29. 1. impatient 2. aghast
3. irritated 4. reflective



30. 1. grateful 2. flirtatious
3. hostile 4. disappointed



31. 1. ashamed 2. confident
3. joking 4. dispirited



32. 1. serious 2. ashamed
3. bewildered 4. alarmed



33. 1. embarrassed 2. guilty
3. fantasizing 4. concerned



34. 1. aghast 2. baffled
3. distrustful 4. terrified



35. 1. puzzled 2. nervous
3. insisting 4. contemplative



36. 1. ashamed 2. nervous
3. suspicious 4. indecisive

Many thanks for taking the time to complete this questionnaire.

Appendix 2: Participants information sheet

Dear Participant,

You are being invited to take part in a research study. Your decision to take part in this study is entirely voluntary and you are under no obligation to do so and your care will not be affected in any way. Before you decide whether or not to take part in this study it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. If there is anything that is not clear, or if you would like more information please ask your clinician. After you have read through the information take some time to decide whether or not you still wish to take part.

What is the purpose of the research study?

I am looking at the reasons why some people have difficulties with impulsive behaviours, such as self-harm and what their feelings are around food. This study aims to look at how people pick up on what others are thinking and feeling, as well as how people think about their own thoughts and feelings. Greater knowledge in this area will help in designing better psychological therapies for people who have impulsive behaviours or strong feelings they find it difficult to deal with.

Why have I been chosen to take part in this study?

Eating disorders and impulsive behaviours represent two very common, but under-researched areas. I want to focus especially on people who present with difficulties around food, as well as difficulties around self-harm so I can see how things like understanding other's feelings and emotions impact on their capacity to engage in therapy.

Who is organising the study?

I am Angie Cucchi, a trainee counselling psychologist, based at City University. My email address is: [REDACTED]

Who reviews the study?

All research in the NHS is looked at by an independent group of people, called a Research Ethics Committee to protect your safety, rights, wellbeing and dignity.

What will happen to me if I take part?

If you would like to take part, you will be given a consent form and questionnaire to fill out. The consent form asks if you consent to taking part in the study. The questionnaire asks

a series of questions mainly directed at feelings about yourself, other people and food. The questionnaire will take about 30 minutes. When you receive the questionnaire-pack, if you are happy to participate, please fill in the questionnaire and when you have finished please give the questionnaire and the consent form to myself or to your clinician in a sealed envelope. You can also post them back directly to me in the Freepost envelope provided.

What are the possible risks and benefits of taking part?

While it is unlikely, it is possible that you might become a little tired from doing the questionnaire. You may experience some upset feelings from answering the questions. If you have concerns about disordered eating, impulsive behaviours or thoughts of hurting yourself, please contact your GP or your keyworker/clinician on your team. The knowledge gained from this study may help improve the treatment of people with strong emotions, self-harm and problems with eating.

Confidentiality

All documents relating to the study will be kept in a locked filing cabinet and only the researcher directly involved in the study will have access to them. No-one outside the study will have knowledge of your name. Your answers on the questionnaire itself will not be linked directly to your name. The completed consent form and questionnaires will be kept separately. Data will be stored electronically with a number, not personal names identifying people's answers. Your GP will not be informed of your participation in this study.

What will happen to the results of this study?

I will use the results of the study to complete a doctorate research project. Nevertheless, your identity will not be revealed. A summary of the results will also be available. This can be emailed or sent to you by post. Please contact me should you wish to be informed of the results.

Who do I speak to if I decide to withdraw from the study or if I want more information?

You are free to decline to enter or to withdraw from the research at any time without having to give a reason. Your care will not be affected in any way if you do so. If you have any questions about the study, please contact Angie Cucchi by email or speak to the keyworker/clinician involved in your care. General information about participating in research can be obtained from INVOLVE (promoting public involvement in NHS, public health and social care research) www.invo.org.uk, 02380 651 088. Alternatively, you can contact your local Patient Advisory Liaison Service (the number is available through NHS Direct 0845 46 47) who can also help if you want to make a complaint about this research.

Should you wish to take part, you will be given a questionnaire and a consent form. Please sign the consent form and complete the questionnaires. Put your consent form

together with the questionnaires in the envelope provided, give this to myself or your clinician or post it back in the Freepost envelope. Please keep this information sheet for future reference

Appendix 3: Consent form

Name of Researcher: Angie Cucchi

Please tick box

- I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
- I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.
- I agree to take part in the above study.

Postal Address

Name	
House number	
Street	
Town	
Postcode	

Name

Date

Signature

Appendix 4: List of support numbers

Contact numbers and websites for further support

NHS Direct 0845 4647
www.nhsdirect.nhs.uk

Samaritans 08457 90 90 90
email: jo@samaritans.org
24-hour telephone helpline offering emotional support for people who are experiencing feelings of distress or despair, including those that may lead to suicide.

SANE helpline: 0845 767 8000
email: sanemail@sane.org.uk
web: www.sane.org.uk
SANEline and SANEmail offer emotional support and information to those experiencing mental health problems, their families and carers.

Beat (Eating Disorders Association) helpline: 08456 341414
www.b-eat.co.uk
email: help@b-eat.co.uk

SELF-INJURY SUPPORT helpline: 0117 925 1119
www.selfinjurysupport.org.uk

Feelings and faces



What do you think this person is thinking or feeling?

If you suffer from an eating disorder and/or self-harm and are interested in participating in a research study about feelings & faces please click on the link below to take part.

https://cityss.qualtrics.com/SE/?SID=SV_9sOL7WgeajExeGF

Greater knowledge in this area will help in designing better psychological therapies for people who have impulsive behaviours or strong feelings they find it difficult to deal with.

The research is carried out as part of a Doctorate Programme at City University and it has received ethical approval from City University, as well as from the NHS. If you would like to ask more questions about the research, please contact Angie Cucchi on [REDACTED] or email:

[REDACTED]

Appendix 6: NHS Ethical Approval RFQ Validation application form

NHS REC Form

Reference:
10/H1102/60

IRAS Version 3.0

Welcome to the Integrated Research Application System

IRAS Project Filter

The integrated dataset required for your project will be created from the answers you give to the following questions. The system will generate only those questions and sections which (a) apply to your study type and (b) are required by the bodies reviewing your study. Please ensure you answer all the questions before proceeding with your applications.

Please enter a short title for this project (maximum 70 characters)

Development and validation of the RFQ54

1. Is your project research?

Yes No

2. Select one category from the list below:

- Clinical trial of an investigational medicinal product
- Clinical investigation or other study of a medical device
- Combined trial of an investigational medicinal product and an investigational medical device
- Other clinical trial or clinical investigation
- Study administering questionnaires/interviews for quantitative analysis, or using mixed quantitative/qualitative methodology
- Study involving qualitative methods only
- Study limited to working with human tissue samples, other human biological samples and/or data (*specific project only*)
- Research tissue bank
- Research database

If your work does not fit any of these categories, select the option below:

Other study

2a. Please answer the following question(s):

- a) Does the study involve the use of any ionising radiation? Yes No
- b) Will you be taking new human tissue samples (or other human biological samples)? Yes No
- c) Will you be using existing human tissue samples (or other human biological samples)? Yes No

3. In which countries of the UK will the research sites be located? (*Tick all that apply*)

- England
- Scotland
- Wales
- Northern Ireland

3a. In which country of the UK will the lead NHS R&D office be located:

- England
- Scotland

Date: 16/08/2010

1

61627/142892/1/656

- Wales
 Northern Ireland
 This study does not involve the NHS

4. Which review bodies are you applying to?

- NHS/HSC Research and Development offices
 Social Care Research Ethics Committee
 Research Ethics Committee
 National Information Governance Board for Health and Social Care (NIGB)
 Ministry of Justice (MoJ)

5. Will any research sites in this study be NHS organisations?

- Yes No

5a. Do you want your application to be processed through the NIHR Coordinated System for gaining NHS Permission?

- Yes No

If yes, you must complete and submit the NIHR CSP Application Form immediately after completing this project filter, before proceeding with completing and submitting other applications.

6. Do you plan to include any participants who are children?

- Yes No

7. Do you plan to include any participants who are adults unable to consent for themselves through physical or mental incapacity? *The guidance notes explain how an adult is defined for this purpose.*

- Yes No

8. Do you plan to include any participants who are prisoners or young offenders in the custody of HM Prison Service in England or Wales?

- Yes No

9. Is the study, or any part of the study, being undertaken as an educational project?

- Yes No

10. Is this project financially supported by the United States Department for Health and Human Services?

- Yes No

11. Will identifiable patient data be accessed outside the clinical care team without prior consent at any stage of the project (including identification of potential participants)?

- Yes No

* Personal Telephone/Mobile [Redacted]
Fax [Redacted]

** This information is optional. It will not be placed in the public domain or disclosed to any other third party without prior consent.
A copy of a current CV (maximum 2 pages of A4) for the Chief Investigator must be submitted with the application.*

A4. Who is the contact on behalf of the sponsor for all correspondence relating to applications for this project?
This contact will receive copies of all correspondence from REC and R&D reviewers that is sent to the CI.

Title Forename/Initials Surname
Prof Peter Fonagy
Address Psychoanalysis Unit, Research Department of Clinical, Educational and Health Psychology
University College London
Gower Street, London
Post Code WC1E 6BT
E-mail [Redacted]
Telephone [Redacted]
Fax [Redacted]

A5-1. Research reference numbers. *Please give any relevant references for your study:*

Applicant's/organisation's own reference number, e.g. R & D (if available): N/A
Sponsor's/protocol number: N/A
Protocol Version: Version 1
Protocol Date: 16/08/2010
Funder's reference number: N/A
International Standard Randomised Controlled Trial Number (ISRCTN): N/A
ClinicalTrials.gov Identifier (NCT number): N/A
European Clinical Trials Database (EudraCT) number: N/A
Project website: N/A

Ref.Number	Description	Reference Number
N/A		N/A

A5-2. Is this application linked to a previous study or another current application?

Yes No

Please give brief details and reference numbers.

A previous study was conducted under NRES reference number 08/H1107/123, 'Mentalization in borderline personality organisation and disordered eating'. The current research is a further development and validation of the RFQ questionnaire previously investigated.

A cross-cultural validation study of the RFQ54 will be running in parallel. A separate ethics application is in process. 'Cross cultural validation of a new measure of mentalization: the Reflective Function Questionnaire 54'.

2. OVERVIEW OF THE RESEARCH

To provide all the information required by review bodies and research information systems, we ask a number of specific questions. This section invites you to give an overview using language comprehensible to lay reviewers and

members of the public. Please read the guidance notes for advice on this section.

A6-1. Summary of the study. *Please provide a brief summary of the research (maximum 300 words) using language easily understood by lay reviewers and members of the public. This summary will be published on the website of the National Research Ethics Service following the ethical review.*

This study proposes to validate a new self-report measure of mentalization, the 54-item Reflective Function Questionnaire (RFQ54), in three populations: Borderline Personality Disorder (BPD), Eating Disorders (ED) and healthy volunteers. A subset of the non-clinical control group will feature hypothesised 'expert' mentalizers like psychologists and psychotherapists. Developed by Fonagy and later piloted by Perkins (2009), the measure seeks to measure mentalization across two domains, 'self' and 'other'. Six-hundred participants will complete a battery of measures including the RFQ54. The factor structure and internal reliability of the measure will be explored across the whole sample and separately in each group. Construct validity will be investigated by comparing it to convergently and divergently-related constructs, e.g. theory of mind, mindfulness, alexithymia, empathy, and general psychopathology. Discriminant validity will be established by the questionnaire's ability to distinguish between clinical and non-clinical populations; BPD and ED; between ED self-harmers and ED non-self-harmers; and between 'expert' mentalizers and non-clinical controls. Test-retest reliability will be investigated by selecting a small sub-group willing to repeat the questionnaire 3 weeks after initial administration. The RFQ54 will be administered to a subset of clinical participants before and after receiving psychological treatment, thus providing evidence for the measure's sensitivity to change. A measure of verbal intelligence will be applied across samples so that this potentially confounding variable may be controlled for. A parallel, but separate study will be seeking to validate the measure cross-culturally in Germany, Sweden, Belgium, Italy, China, and Norway. In addition to the groups described above, a clinical control sample will be added to the cross-cultural investigation: people with moderate anxiety and depression. The international study also seeks to establish criterion validity by comparing the RFQ54 with the gold standard measure of mentalization: the Rated Adult Attachment Interview (Main & Goldwyn, 1994).

A6-2. Summary of main issues. *Please summarise the main ethical and design issues arising from the study and say how you have addressed them.*

The main ethical issues are around consent and possibility of participants becoming upset. However, these have been discussed with clinicians beforehand and are in my opinion minimal.

PURPOSE AND DESIGN

This study aims to validate a new measure of mentalization in Borderline Personality Disorder (BPD), Eating Disorder (ED) and healthy subjects. Although none of these diagnoses are mentioned in the questionnaire battery, at the end of the study a report will be distributed to interested participants. Participants reading the results of this study, particularly those in ED services, may be shocked to realise that a proportion of them met BPD criteria. Many consider BPD to be a stigmatising label, and therefore may find these potential results difficult to accept.

In order to investigate the study's main aims questions are asked of participants that they may find painful to answer. Questions about substance misuse or suicidal feelings may particularly offend the non-clinical participants who are possibly not as used to talking about these subjects as clinical participants might be. These issues have been addressed by providing contact numbers if participants wish to complain or ask further questions. If requested, participants will be given a list of sources of further support (see attached 'Support Numbers'). They may also consult their clinician on the team.

This project suffers from the usual flaws endemic to self-report questionnaires. Selecting which measures to use involved a trade-off between minimising participant burden and need for comprehensive measurement. Some concern was raised by reviewers regarding its length and potential for participant burden. They suggested that if participants became tired they may leave it incomplete which would present a serious threat to the study's validity. For this reason the measure was piloted on a small sample of clinical and non-clinical participants. The questionnaire pack took 45 minutes to complete, and whilst undeniably lengthy, nonetheless is still within the norms for research.

RECRUITMENT

As this is a validation study a large sample size is required (minimum N=600). Without external funding meeting this target is a challenge. The assistance of five collaborators, a two year time frame and recruitment from a number of sites has made this possible. No coercion will be applied to participants. Clinicians will merely offer the questionnaire pack to their patients and the potential participant has 24 hrs minimum to decide whether they wish to complete it. There is no stipulation that it must be completed in the clinic, and participants are free to take it home and post using the SAE. Clinicians have no direct interest or anything to gain from the project so they do not have a motive for pressuring participants.

A small financial incentive is offered participants due to the length of the questionnaire battery. However, its modest nature and the fact that it is presented as a prize draw means it is unlikely that this will put undue pressure on

financially needy patients.

If difficulties arise in recruiting participants to do the full questionnaire battery, some participants may be recruited who only do the RFQ54 rather than the full questionnaire battery. In order to conduct correlational analyses for construct validity a minimum of 134 are required in each sample. Therefore, if necessary the other 66-166 could only have completed the RFQ54. This would provide both a minimum sample size for correlations and factor analysis. However, this will only be resorted to if by the second year of recruitment figures are remaining low. It is more practical and statistically more powerful if the whole sample has the full dataset.

INCLUSION/EXCLUSION

In order to maintain the homogeneity of the various samples, screening questionnaires were included in the battery of measures. For example, participants with substantial eating pathology as indicated by the SCOFF questionnaire or Borderline traits on the PAI-BOR will be screened out from analyses within the non-clinical samples.

CONSENT

All participants will be given plenty of opportunity to ask any questions so that their consent may be informed. Simple practical questions regarding the research can be dealt with by clinicians, but if participants have more complex questions participants will be directed to contact one of the research collaborators or the Chief Investigator. It will be stressed to all participants that they are under no obligation whatsoever to participate, and that they may refuse with no impact on their clinical care. Likewise if after giving their consent, they may withdraw their consent at any time. The issue of capacity to consent is an important one in this study. Some people with severe eating disorders or personality disorder go through periods where their ability to make informed decisions about their own safety is impaired. Normally clients who are in an extreme crisis are hospitalised. This study however recruits outpatients and will largely avoid this problem. If a participant does become seriously disturbed and their capacity to consent is impaired, the clinician treating them will not offer the questionnaire to them. If this occurs after they have given consent, the data will be withdrawn from the study. All participants have the right to withdraw their consent at any point, but these participants' ability to make this decision is impaired. Therefore their data will be withdrawn as it cannot be assumed they continue to give consent.

RISKS, BURDENS AND BENEFITS

The research poses few risks to participants. They may become upset answering some of the questions, e.g. on self-harm or substance misuse. They may become tired completing the questionnaire. Piloting the questionnaire revealed it took 35-45 minutes. It was felt therefore that allowing 45 minutes would be sufficient time, and not provide an undue burden on participants. Unfortunately, the low level of funding for this project did not allow individual payment of participants. However a small incentive in the form of a prize draw may provide some benefit. Also, by feeding back the results of the end of the study, and hearing about how this research could contribute to better future treatment for BPD and ED may provide some indirect benefit to participants. They may feel a sense of satisfaction that they have contributed to this process.

CONFIDENTIALITY

All answers on the questionnaires will be anonymous and confidential, and therefore if a participant reveals in a questionnaire they have engaged in substance misuse, self-harm or criminal behaviour such as stealing, no action will be taken, i.e. the researcher will not be routinely passing information on to other health services such as GPs in primary care. However, the questionnaire may act as a catalyst and some participants may voluntarily choose to disclose something that might endanger their safety or someone else's. Clinicians will deal with this according to normal clinical practice and professional practice guidelines (e.g. British Psychological Society or Royal College of Psychiatrists).

No patient identifiable information will be stored electronically. Participant identification numbers will be used to identify respondents. Any electronic data files will be encrypted. Questionnaires will be kept in a locked cabinet. Patients will only have to complete a consent form with their name if they wish to be entered in the prize draw. Returned forms will also be kept in a locked location separately from the other materials. Units will be contacted on a monthly basis and checked that this is happening.

WHAT WILL HAPPEN AT THE END OF THE STUDY?

It is planned to publish a journal article arising from this research, and thus make the measure available copyright-free to mentalization researchers and clinicians. Results will be fed back to the service-users and staff at the participating units via an oral presentation and brief written report. The intellectual property rights to this measure will be held by its original developer Prof. Peter Fonagy.

A10. What is the principal research question/objective? *Please put this in language comprehensible to a lay person.*

1. To investigate the factor structure of the RFQ in three populations (BPD, ED and healthy volunteers).

2. To investigate the invariance of the RFQ's factor structure across socio-economic status (SES), education level, cognitive ability, clinical diagnosis and gender.
3. To investigate the internal reliability and construct validity of the RFQ as a measure of mentalization.

A11. What are the secondary research questions/objectives if applicable? Please put this in language comprehensible to a lay person.

4. To investigate the measure's test-retest reliability and sensitivity to change.
5. To investigate the measure's ability to discriminate between clinical and non-clinical groups; between ED and BPD; between ED self-harmers and ED non-self-harmers; and between hypothesised 'expert' mentalizers and non-clinical controls.

A12. What is the scientific justification for the research? Please put this in language comprehensible to a lay person.

SCIENTIFIC BACKGROUND

Reflective function (RF), or 'mentalization', describes an individual's ability 'to hold others' minds in mind' (Fonagy et al., 2002). RF allows individuals to perceive behaviours in terms of mental state constructs, thereby making them meaningful, explicable and predictable. Effective mentalization develops in secure early relationships. People who experienced abusive or non-validating parenting may go on to develop disorders of the self, such as borderline personality disorder (BPD) or eating disorders (ED). BPD is a severe personality dysfunction characterised by behavioural features such as impulsivity, identity disturbance, suicidal behaviour, emptiness, and intense and unstable personal relationships. EDs include anorexia (AN), bulimia (BN), and Eating Disorders Not Otherwise Specified (EDNOS) such as binge eating disorder (BED). Both conditions are highly disabling and linked to increased mortality rates.

Key symptoms common to BPD and EDs are compulsive/impulsive behaviours. Impulsive BPD and ED patients engage in multiple self-destructive, dangerous or anti-social behaviours such as self-harm, bingeing on food and then vomiting, substance misuse, stealing, and risky sex. Studies are beginning to suggest that the ability to mentalize regulates these behaviours. Indeed, evidence indicates that RF is lower in BPD and ED than in other psychiatric disorders (Fonagy et al., 1996). Little evidence to date exists on healthy mentalizing, and perhaps if we could better understand how 'expert' mentalizers like psychotherapists construe mental states in themselves and others, we may have a better chance of helping those who struggle in these areas (Dziobek et al., 2005). Identifying the pathological core processes driving BPD or ED impulsive behaviours, and the healthy processes of 'expert' mentalizers like psychotherapists, will be helpful when designing therapeutic interventions for BPD and ED.

POLICY BACKGROUND

NICE guidelines on BPD and ED (2009, 2004) suggest there are still considerable gaps in our knowledge about which treatments are effective. Apart from family interventions, little is known to work for AN, and while cognitive behavioural therapy (CBT) and interpersonal psychotherapy are effective for the treatment of BN, knowledge is lacking about what works for people with atypical ED, or people who have not responded to CBT. BPD is also notoriously hard to treat. The National Institute of Mental Health report 'Personality disorder: No longer a diagnosis of exclusion' (2003) recommends that specialist multi-disciplinary services be set up to assess and treat people with a personality disorder. They suggest having a coherent theoretical model throughout the service is crucial. Mentalization Based Therapy (MBT) is suggested by NICE as one such appropriate model. MBT has already shown promising results in BPD (Bateman & Fonagy, 1999), and Skaderud (2007) suggests it has much potential to help people with ED also.

WHY DO WE NEED A SELF-REPORT MEASURE OF MENTALIZATION?

Further quantitative research into mentalization in BPD or ED is currently hampered by difficulties with measurement. No self-report measure of mentalization exists. Traditionally, an RF rating scale has been applied to transcripts from the Adult Attachment Interview (Main & Goldwyn, 1994) to determine a person's mentalization ability (Fonagy et al., 1998). This is a lengthy and time-consuming process, and therefore a brief, self-report measure of mentalization is urgently needed.

This study therefore proposes to validate a new measure, the Reflective Function Questionnaire (RFQ), in three populations: BPD, ED and healthy volunteers. Developed by Peter Fonagy, 46 questionnaire items were generated in consultation with a panel of international experts in the field. This early version of the measure was piloted by Perkins (2009) on a mixed BPD-ED and non-clinical sample of 401 participants. A two factor model appeared with good reliability on one factor (mentalization of self $\alpha=.75$), and weaker reliability on the other (mentalization of other $\alpha=.63$). Due to the heterogeneous sample, conclusions regarding the measure's validity and factor structure in BPD or ED

populations remain limited. Therefore, in this second phase of the research further items have been generated to strengthen the weaker 'other' scale to make an augmented 54-item version. This will be administered to larger more homogeneous samples (BPD, ED and non-clinical controls) so that invariance of the factor structure across populations can be properly tested.

HOW THIS RESEARCH MAY POSITIVELY IMPACT ON SERVICES

The results of this study will allow more informed decisions to be made about the provision of services for people with BPD or ED. For example, establishing the key processes behind the disorders will enable more targeted interventions. Interventions based on mentalization theory can then be more easily evaluated using a self-report measure.

This research will contribute to improved value for money because it will identify those individuals who have most difficulty mentalizing. Having a measurement tool which quickly identifies the nature of their difficulties will allow us to offer more appropriate interventions right at the beginning.

A13. Please give a full summary of your design and methodology. *It should be clear exactly what will happen to the research participant, how many times and in what order. Please complete this section in language comprehensible to the lay person. Do not simply reproduce or refer to the protocol. Further guidance is available in the guidance notes.*

METHODOLOGY AND DESIGN

PURPOSE

This study aims to validate a new measure of mentalization, the Reflective Function Questionnaire (RFQ) in people with an eating disorder (ED), borderline personality disorder (BPD) and non-clinical populations.

HYPOTHESES

Factor structure of the RFQ54

- 1)The RFQ will display a two-factor structure: 'internal-self' and 'internal-other'.
- 2)No predictions are made regarding the invariance of the two-factor structure across gender, education level, cognitive ability, diagnosis and SES.

Reliability and validity of the RFQ

- 3)It is predicted that the RFQ will display adequate internal reliability.
- 4)The RFQ will display good construct validity in that high mentalization will inversely relate to a measure of general psychopathology, eating disorder traits, borderline traits, alexithymia and positively relate to Theory of Mind (ToM), mindfulness and empathy.

Test retest reliability and sensitivity to change of the RFQ

- 5)The RFQ54 will show good test-retest reliability.
- 6)It is anticipated that patients' scores on the RFQ54 will be significantly lower after they have received psychological treatment.

Discriminant validity

- 7)The RFQ will have good discriminant validity in that it will be able to distinguish between clinical and non-clinical populations, between BPD and ED; between comorbid ED or BPD and non-comorbid forms of these disorders; between psychotherapists and other non-clinical controls; and between ED self-harmers and ED non-self harmers.
- 8)It will be possible to establish a cut-off score between clinical and non-clinical groups. No predictions are made regarding establishing a cut-off score that distinguishes between clinical groups.

DESIGN

The proposed study will use a cross-sectional questionnaire-based design. That means participants complete a pack of questionnaires at one time point. Various validated measures will be used to assess how reliably and validly the RFQ measures mentalization in non-clinical and clinical populations. The two-factor structure of the RFQ will be explored in three separate large homogeneous samples. Subsequently, structural equation modelling will be applied to the data to confirm/disconfirm the invariance of the factor structure across the different populations.

Collaboration with other researchers

The present study involves the collaboration of four trainees (three trainee clinical psychologists and one trainee counselling psychologist) and one post-doctoral researcher (medic) who will be assisting the present author with data collection while pursuing research for their doctoral degrees. Veronica Brough (University of Surrey) will be analysing the relationship between BMI and cognitive impairment amongst ED patients, and whether cognitive impairment acts as a confounding variable on the RFQ. Angie Cucchi (University of East London) will be studying whether scores on the RFQ can distinguish between ED patients who self-harm and those who do not. Simon Rogoff (University of Surrey)

will be investigating hypothesised 'expert mentalizers', and whether scores on the RFQ can distinguish between people who are involved in the psychotherapeutic professions and those who do not work clinically. A fourth trainee, Kim Wyatt-Brookes (University College London) may be joining the project later in order to study mentalization amongst trainee clinical psychologists. All their areas of interest are covered under the main protocol and questionnaire battery.

SAMPLE (see 'Research sites summary' for greater detail)

The present study plans to recruit a minimum of 600 participants. An ideal upper limit would be 900 participants. A minimum of two hundred participants will be recruited into each of three groups: BPD, ED and non-clinical controls. A subgroup of expert mentalizers will comprise a part of the non-clinical controls.

If difficulties arise in recruiting participants to do the full questionnaire battery, some participants may be recruited who only do the RFQ54 rather than the full questionnaire battery. In order to conduct correlational analyses for construct validity a minimum of 134 are required in each sample. Therefore, if necessary the other 66-166 could only have completed the RFQ54. This would provide both a minimum sample size for correlations and factor analysis. However, this will only be resorted to if by the second year of recruitment figures are remaining low. It is more practical and statistically more powerful if the whole sample has the full dataset.

Clinical participants will be recruited during assessment at 6 specialist ED & BPD NHS sites. Non-clinical controls will be recruited from 5 non-NHS sites like clinical psychology training courses or professional networks of qualified psychologists/psychotherapists. An attempt will be made to match participants by age, gender and socio-economic status.

DATA TO BE COLLECTED

Participants will complete the 'Feelings & Faces' questionnaire battery. This includes a number of established and validated questionnaires as well as the target measure for validation: the RFQ54. All questionnaires are administered to all participants unless specifically mentioned otherwise.

1. Demographic items including previous experience of therapy and further questions on participants' occupation 13 items

2. Mentalization 54 items
Reflective Function Questionnaire

3. Eating Disorder 5 or 22 items
The SCOFF (Morgan et al., 1999) will be administered to BPD and non-clinical groups. The Eating Disorder Diagnostic Scale (EDDS) (Stice et al., 2000) will be administered to ED participants. Height and weight to calculate Body Mass Index (BMI) will be obtained from clinical records. Alternatively, BMI can be calculated from the self-report height and weight on the EDDS.

4. Empathy 7 items
Perspective-Taking Subscale (PTS) of the Interpersonal Reactivity Index (Davis, 1983)

5. Mindfulness 18 items
Kentucky Inventory of Mindfulness Scale (Baer et al., 2004) 'Describe' and 'Act with Awareness' subscales

6. Disability 3 items
Sheehan Disability Scale. (Sheehan, 1983)

7. Alexithymia 20 items
Toronto Alexithymia Scale (Bagby et al., 1994)

8. General psychopathology 53 items
Brief Symptom Inventory (Derogatis, 1993; Derogatis & Melisaratos, 2009). Global Severity Index will be used.

9. Borderline Personality Disorder 24 items
Personality Assessment Inventory – Borderline Features subscale PAI-BOR (Morey, 1991, 2007).

10. Cognitive ability
The Mill Hill Vocabulary Scale from Raven's Progressive Matrices – Short Form (17 items) (Raven et al., 1962) will be administered across the majority of the sample. ED participants will be administered the 38-item Multiple Ability Self-Report Questionnaire (Seidenberg et al., 1994).

11.Theory of Mind 36 items
Reading the Mind in the Eyes (Baron-Cohen et al., 2001).

12.Social desirability 12 items.
Impression Management Subscale of the Balanced Inventory of Differential Responding (BIDR) (Paulhus, 1984; Paulhus, 1995).

TOTAL ITEMS FOR ED PARTICIPANTS:300
TOTAL ITEMS FOR BPD AND NON-CLINICAL CONTROLS: 262

TIMESCALE

Aug/Sept 2010: Apply R&D, NRES & University Ethics
November 2010: Start recruitment
November 2011: Review recruitment rate. Adjust recruitment strategy as necessary
November 2012: Finish recruitment
November 2012-June 2013: Analysing data, writing draft of journal article

PROCEDURE FOR NHS CLINICAL SAMPLES

Distributing the questionnaires.

- Clinical sites: Participants will be given the questionnaire pack at assessment. Information on the study will be given 24 hours before, so that participants may make an informed choice about whether to participate. A subsample of 30 people from clinical settings will be re-administered the RFQ 3 weeks later.

- Non-clinical sites: posters and/or emails advertising the study will direct potential participants to pick up questionnaire packs from central points.

- All sites: By completing a questionnaire and returning it participants show they have given their consent to partake in the study. Those participants who wish to be entered in the prize draw will complete a separate form giving their contact details so that the prize can be sent to them.

Collecting the questionnaires

- Clinical sites: Ideally questionnaires will be completed on site and handed directly to clinicians. Alternatively, participants can complete the questionnaire at home and then return it directly to the researcher using the supplied SAE. Participants who wish to be entered into the prize draw will give their name and email address/postal address on the consent form so that they can be contacted in the event that they are selected. ED patients only: Participants who wish to enter the prize draw will provide their name and contact details, and in so doing also indicate that they give their consent for their clinical record to be consulted to attain BMI.

- Non-clinical sites: They will complete questionnaires and return them to central collection points.

Each collaborator will be responsible for collecting questionnaires from particular samples (see Appendix A in the research proposal to see which collaborator is linked to which sample).

Inputting data from research sites

- When participants wish to complete their questionnaires at home they can use freepost envelopes to send them directly to the researcher. The 5 research collaborators will be responsible for inputting their portion of the data into separate databases. The Chief Investigator will provide a standard template for this. The Chief Investigator will be responsible for amalgamating the three databases into a master database and checking the overall integrity of the data.

Awarding the incentive

- At the end of the study, participants who opted to provide their contact details will be drawn out of a hat by the Chief Investigator with a £15 prize being awarded for every 40 participants. Vouchers will be sent to participants' home addresses.

STATISTICAL ANALYSIS See Question A62

SERVICE-USER INVOLVEMENT & PARTICIPANT FEEDBACK

In order to check the palatability of the questionnaire battery, 10 service users completed a pilot form of the battery and then were interviewed to elicit their impressions of the pack.

A14-1. In which aspects of the research process have you actively involved, or will you involve, patients, service users, and/or their carers, or members of the public?

- Design of the research
- Management of the research
- Undertaking the research
- Analysis of results
- Dissemination of findings
- None of the above

Give details of involvement, or if none please justify the absence of involvement.
Service users were consulted on the first version of the RFQ (the RFQ46). After the questionnaire was revised, the RFQ54 was piloted on 10 service users to assess palatability and their feedback on layout, questionnaires included etc.

4. RISKS AND ETHICAL ISSUES

RESEARCH PARTICIPANTS

A17-1. Please list the principal inclusion criteria (list the most important, max 5000 characters).

1. Clinical samples: a primary diagnosis of BPD, AN, BN or EDNOS. Non-clinical samples: an absence of borderline or eating pathology.
Expert mentalizing subgroup - profession as a psychotherapist/psychologist.
2. Age between 18 and 65
3. English speaker.

A17-2. Please list the principal exclusion criteria (list the most important, max 5000 characters).

Absence of mental retardation or a psychotic disorder.

RESEARCH PROCEDURES, RISKS AND BENEFITS

A18. Give details of all non-clinical intervention(s) or procedure(s) that will be received by participants as part of the research protocol. These include seeking consent, interviews, non-clinical observations and use of questionnaires.

- Please complete the columns for each intervention/procedure as follows:
1. Total number of interventions/procedures to be received by each participant as part of the research protocol.
 2. If this intervention/procedure would be routinely given to participants as part of their care outside the research, how many of the total would be routine?
 3. Average time taken per intervention/procedure (minutes, hours or days)
 4. Details of who will conduct the intervention/procedure, and where it will take place.

Intervention or procedure	1	2	3	4
Giving information and handing out questionnaires	1	5	mins	Clinical sites: Patient's clinician on site Non-clinical sites: participant picks up a questionnaire pack from central locations. Alternatively participants are approached directly and are offered a questionnaire.
				Simon Rogoff

			Angie Cucchi Kim Wyatt-Brookes Tobi Nolte
Seeking informed consent. Participant telephones researcher if they have a question about study.	1	5 mins	Alesia Perkins Veronica Brough Simon Rogoff Angie Cucchi Kim Wyatt-Brookes Tobi Nolte Off-site
Participant completes 'Feelings & faces' questionnaire battery.	1	45 mins	Clinical sites: Participant completes questionnaire and hands back to their clinician or posts it directly to researcher. Non-clinical sites: participant places questionnaire in central collection box or posts back directly to researcher. Off-site or on-site
Test-retest reliability: A small subset of participants completes a second copy of the RFQ54 3 weeks later	1	5 mins	Clinical samples: Patient's clinician on site Non-clinical samples: Alesia Perkins Veronica Brough Simon Rogoff Angie Cucchi Kim Wyatt-Brookes Tobi Nolte
Sensitivity to change of the RFQ54: a small subset of the clinical samples completes a second copy of the RF54 at the end of their psychological treatment	1	5 mins	Clinical samples: Patient's clinician on site

A21. How long do you expect each participant to be in the study in total?

Most participants will be in the study for 45 minutes while they are completing the questionnaire. If they do not want to be entered into the prize draw their involvement ends there.

A small subset of willing volunteers will complete a second copy of the RFQ54 three weeks later.

A further small subset of willing volunteers will complete the RFQ54 at the end of their psychological treatment. This could be as long as a year-18 months later.

A22. What are the potential risks and burdens for research participants and how will you minimise them?

For all studies, describe any potential adverse effects, pain, discomfort, distress, intrusion, inconvenience or changes to lifestyle. Only describe risks or burdens that could occur as a result of participation in the research. Say what steps would be taken to minimise risks and burdens as far as possible.

The research poses few risks to participants. They may become upset answering some of the questions, e.g. on self-harm or substance misuse. They may become tired completing the questionnaire. Piloting the questionnaire with a service user revealed it took 40 minutes. It was felt therefore that allowing 45 minutes would be sufficient time, and not provide an undue burden on participants. Participants who become distressed as a result of completing a questionnaire will be able to access emotional support from their clinician. A list of telephone help lines will also be provided to clinicians to give to participants in the event of distress. Non-clinical participants will have a copy of this support sheet in their questionnaire packs.

A23. Will interviews/ questionnaires or group discussions include topics that might be sensitive, embarrassing or upsetting, or is it possible that criminal or other disclosures requiring action could occur during the study?

Yes No

If Yes, please give details of procedures in place to deal with these issues:

Participants will be asked potentially upsetting questions about disturbed eating patterns such as self-induced vomiting, self-injurious behaviour, and substance misuse. All answers on the questionnaires will be anonymous and confidential, and therefore if a participant reveals in a questionnaire they have engaged in substance misuse, self-harm or criminal behaviour such as stealing, no action will be taken, i.e. the researcher will not be routinely passing information on to other health services such as GPs in primary care. It is possible that the questionnaire may act as a catalyst and some participants may choose to disclose certain information to their clinician. This will be managed in the normal way in accordance with good clinical practice guidelines (e.g British Psychological Society or Royal College of Psychiatrists). Other contact numbers for support will also be provided, both on the patient information sheet and as an extra resource for participants to access if needed.

A24. What is the potential for benefit to research participants?

By feeding back the results at the end of the study, and hearing about how this research could contribute to better future treatment for BPD and ED may provide some indirect benefit to participants. They may feel a sense of satisfaction that they have contributed to this process. Participants will also be offered the opportunity to enter a prize draw for £15 vouchers. If they wish to be entered in the draw, participants give their contact details on a separate form which can be mailed back independently from the questionnaire.

A26. What are the potential risks for the researchers themselves? (if any)

None

RECRUITMENT AND INFORMED CONSENT

In this section we ask you to describe the recruitment procedures for the study. Please give separate details for different study groups where appropriate.

A27-1. How will potential participants, records or samples be identified? Who will carry this out and what resources will be used? For example, identification may involve a disease register, computerised search of GP records, or review of medical records. Indicate whether this will be done by the direct healthcare team or by researchers acting under arrangements with the responsible care organisation(s).

CLINICAL SAMPLE

i) Identified

All new clients who have been referred for psychological therapy will be considered for inclusion in the study.

ii) Approached.

New referrals will be approached by letter. When clients are invited for an assessment interview, the Patient Information Sheet will be sent out with their appointment letter inviting them to participate in the research study. All participants will have 24 hours to consider whether they want to take part.

iii) Recruited

At their assessment interview or next therapy session clinicians will answer any simple practical questions about the study. Questions of a more complex nature will be directed to the research collaborators. Participants may telephone the researchers' office. If the researcher is not present the secretary can take a message and the participant will be called back. Participants who are happy to proceed then can either complete the questionnaire in the session or at home. A minimum of 24 hrs will be given to the participant to make their decision.

All completed questionnaires will either be forwarded by mail or picked up in person by one of research collaborators.

NON-CLINICAL SAMPLES

i) Identified

All current students on the three identified training courses or qualified psychologists in professional networks (see 'Research sites summary sheet') will be considered for inclusion in the study.

ii) Approached

Potential participants will respond to recruitment posters or emails advertising the study by collecting questionnaire

packs from reception areas if they are interested in participating. Some participants will be approached directly e.g. community sample.

iii) Recruited

Completed questionnaires will be left in sealed boxes in central areas where research collaborators can collect them. Alternatively, participants can post the completed questionnaires directly back to research collaborators.

NOTE: It will be explained to all participants that their participation is entirely voluntary and that their access to services will not be affected in any way if they refuse.

A27-2. Will the identification of potential participants involve reviewing or screening the identifiable personal information of patients, service users or any other person?

Yes No

Please give details below:

A28. Will any participants be recruited by publicity through posters, leaflets, adverts or websites?

Yes No

If Yes, please give details of how and where publicity will be conducted, and enclose copy of all advertising material (with version numbers and dates).

NON-CLINICAL SAMPLES ONLY

Potential participants will respond to recruitment posters or emails advertising the study by collecting questionnaire packs from reception areas if they are interested in participating. See 'Recruitment Poster' and 'Recruitment email'

A29. How and by whom will potential participants first be approached?

NON-CLINICAL SAMPLES: recruited through poster/email or directly in community locations.

CLINICAL SAMPLES:

New referrals will first be approached by letter. When clients are invited for an assessment interview, the Patient Information Sheet will be sent out with their appointment letter inviting them to participate in the research study. All participants will have 24 hours to consider whether they want to take part. At their assessment interview or next therapy session clinicians will answer any simple practical questions about the study.

A30-1. Will you obtain informed consent from or on behalf of research participants?

Yes No

If you will be obtaining consent from adult participants, please give details of who will take consent and how it will be done, with details of any steps to provide information (a written information sheet, videos, or interactive material). Arrangements for adults unable to consent for themselves should be described separately in Part B Section 6, and for children in Part B Section 7.

If you plan to seek informed consent from vulnerable groups, say how you will ensure that consent is voluntary and fully informed.

Informed consent will be obtained by all participants. Those participants who do not wish to be entered in the prize draw will have no patient identifiable information on their questionnaire and therefore written consent will not be taken as their completion of the questionnaire implies their consent. Participants who wish to be entered in the prize draw will complete a written consent form also giving their contact details. A copy of this will be kept on their file. All ED participants will complete a consent form giving consent to Veronica Brough and Alesia Perkins to access their medical file in order to extract height and weight to calculate BMI. No other information will be extracted.

If you are not obtaining consent, please explain why not.

Please enclose a copy of the information sheet(s) and consent form(s).

A30-2. Will you record informed consent (or advice from consultees) in writing?

Yes No

If No, how will it be recorded?

Only ED participants will have written consent as standard as this is required to extract their BMI data from their file. Other participants give 'implicit consent' by completing the questionnaire. However, any participant who wishes to be entered in the prize draw will need to complete a consent form giving their name and address so prizes may be sent out.

A31. How long will you allow potential participants to decide whether or not to take part?

24 hours minimum

A33-1. What arrangements have been made for persons who might not adequately understand verbal explanations or written information given in English, or who have special communication needs?(e.g. translation, use of interpreters)

None- this study is in English and requires basic literacy. No resources are available for translators or interpreters.

A35. What steps would you take if a participant, who has given informed consent, loses capacity to consent during the study? Tick one option only.

- The participant and all identifiable data or tissue collected would be withdrawn from the study. Data or tissue which is not identifiable to the research team may be retained.
- The participant would be withdrawn from the study. Identifiable data or tissue already collected with consent would be retained and used in the study. No further data or tissue would be collected or any other research procedures carried out on or in relation to the participant.
- The participant would continue to be included in the study.
- Not applicable – informed consent will not be sought from any participants in this research.

Further details:

CONFIDENTIALITY

In this section, personal data means any data relating to a participant who could potentially be identified. It includes pseudonymised data capable of being linked to a participant through a unique code number.

Storage and use of personal data during the study

A36. Will you be undertaking any of the following activities at any stage (including in the identification of potential participants)?(Tick as appropriate)

- Access to medical records by those outside the direct healthcare team
- Electronic transfer by magnetic or optical media, email or computer networks
- Sharing of personal data with other organisations
- Export of personal data outside the EEA
- Use of personal addresses, postcodes, faxes, emails or telephone numbers
- Publication of direct quotations from respondents
- Publication of data that might allow identification of individuals
- Use of audio/visual recording devices

Storage of personal data on any of the following:

- Manual files including X-rays
- NHS computers
- Home or other personal computers
- University computers
- Private company computers
- Laptop computers

Further details:

Those participants who wish to be entered in the prize draw will complete a separate form giving their contact details so that the prize can be sent to them.

ED participants will be asked to give their consent to the researchers accessing their medical file to extract height and weight in order to calculate BMI.

A38. How will you ensure the confidentiality of personal data? *Please provide a general statement of the policy and procedures for ensuring confidentiality, e.g. anonymisation or pseudonymisation of data.*

Data held electronically will be password protected and anonymised. All questionnaires and patient information given for the prize draw will be held in a locked cabinet.

A40. Who will have access to participants' personal data during the study? *Where access is by individuals outside the direct care team, please justify and say whether consent will be sought.*

Those participants who wish to be entered in a prize draw will give their name and contact details on a separate form which they can then return to the researcher in a separate envelope than the questionnaire. Only members of the researcher's team will have access to their questionnaires and contact details.

ED participants will be asked for their consent for the researchers to access their medical record in order to extract information about height and weight. No other information will be extracted.

Storage and use of data after the end of the study

A43. How long will personal data be stored or accessed after the study has ended?

- Less than 3 months
- 3 – 6 months
- 6 – 12 months
- 12 months – 3 years
- Over 3 years

INCENTIVES AND PAYMENTS

A46. Will research participants receive any payments, reimbursement of expenses or any other benefits or incentives for taking part in this research?

- Yes No

If Yes, please give details. For monetary payments, indicate how much and on what basis this has been determined.

Participants will also be offered the opportunity to enter a prize draw of £15 for every 40 participants. This will be presented in the form of a voucher which can be mailed out to them. If they wish to be entered in the draw, participants give their contact details on a separate form which can be mailed back independently from the questionnaire if they

should wish.

A47. Will individual researchers receive any personal payment over and above normal salary, or any other benefits or incentives, for taking part in this research?

Yes No

A48. Does the Chief Investigator or any other investigator/collaborator have any direct personal involvement (e.g. financial, share holding, personal relationship etc.) in the organisations sponsoring or funding the research that may give rise to a possible conflict of interest?

Yes No

NOTIFICATION OF OTHER PROFESSIONALS

A49-1. Will you inform the participants' General Practitioners (and/or any other health or care professional responsible for their care) that they are taking part in the study?

Yes No

If Yes, please enclose a copy of the information sheet/letter for the GP/health professional with a version number and date.

PUBLICATION AND DISSEMINATION

A50. Will the research be registered on a public database?

Yes No

Please give details, or justify if not registering the research.

A51. How do you intend to report and disseminate the results of the study? Tick as appropriate:

- Peer reviewed scientific journals
- Internal report
- Conference presentation
- Publication on website
- Other publication
- Submission to regulatory authorities
- Access to raw data and right to publish freely by all investigators in study or by Independent Steering Committee on behalf of all investigators
- No plans to report or disseminate the results
- Other (please specify)
Feedback to clinical teams.

A53. Will you inform participants of the results?

Yes No

Please give details of how you will inform participants or justify if not doing so.

A brief report detailing the results will be sent to collaborating clinicians/researchers to offer to participants.

5. Scientific and Statistical Review

A54. How has the scientific quality of the research been assessed? Tick as appropriate:

- Independent external review
 Review within a company
 Review within a multi-centre research group
 Review within the Chief Investigator's institution or host organisation
 Review within the research team
 Review by educational supervisor
 Other

Justify and describe the review process and outcome. If the review has been undertaken but not seen by the researcher, give details of the body which has undertaken the review:

The research protocol has been reviewed by the four trainees participating, and one of their supervisors. It has also been reviewed by the postdoctoral researcher collaborating and the other main collaborators Peter Fonagy and Patrick Luyten.

For all studies except non-doctoral student research, please enclose a copy of any available scientific critique reports, together with any related correspondence.

For non-doctoral student research, please enclose a copy of the assessment from your educational supervisor/ institution.

A56. How have the statistical aspects of the research been reviewed? Tick as appropriate:

- Review by independent statistician commissioned by funder or sponsor
 Other review by independent statistician
 Review by company statistician
 Review by a statistician within the Chief Investigator's institution
 Review by a statistician within the research team or multi-centre group
 Review by educational supervisor
 Other review by individual with relevant statistical expertise
 No review necessary as only frequencies and associations will be assessed – details of statistical input not required

In all cases please give details below of the individual responsible for reviewing the statistical aspects. If advice has been provided in confidence, give details of the department and institution concerned.

	Title Forename/Initials Surname
	Dr Patrick Luyten
Department	PhD
Institution	Catholic University of Leuven, Belgium
Work Address	Department of Psychology Tiensestraat 102 - bus 03722 Leuven
Post Code	B-3000
Telephone	[REDACTED]
Fax	
Mobile	
E-mail	[REDACTED]

Please enclose a copy of any available comments or reports from a statistician.

A57. What is the primary outcome measure for the study?

Reflective Function Questionnaire 54 - a measure of mentalization

A58. What are the secondary outcome measures? (if any)

Eating Disorder 5 or 22 items

The SCOFF (Morgan et al., 1999) will be administered to BPD and non-clinical groups. The Eating Disorder Diagnostic Scale (EDDS) (Stice et al., 2000) will be administered to ED participants. Height and weight to calculate Body Mass Index (BMI) will be obtained from clinical records. Alternatively, BMI can be calculated from the self-report height and weight on the EDDS.

Empathy 7 items

Perspective-Taking Subscale (PTS) of the Interpersonal Reactivity Index (Davis, 1983)

Mindfulness 18 items

Kentucky Inventory of Mindfulness Scale (Baer et al., 2004). 'Describe' and 'Act with awareness' subscales.

Disability 3 items

Sheehan Disability Scale. Three questions: Work, social, home/family (Sheehan, 1983)

Alexithymia 20 items

Toronto Alexithymia Scale (Bagby et al., 1994)

General psychopathology 53 items

Brief Symptom Inventory (Derogatis, 1993; Derogatis & Melisaratos, 2009). Global Severity Index will be used.

Borderline Personality Disorder 24 items

Personality Assessment Inventory – Borderline Features subscale PAI-BOR (Morey, 1991, 2007)

Cognitive ability

The Mill Hill Vocabulary Scale from Raven's Progressive Matrices – Short Form (17 items) (Raven et al., 1962) will be administered across the majority of the sample. ED participants will be administered the 38-item Multiple Ability Self-Report Questionnaire (Seidenberg et al., 1994).

Theory of Mind 36 items

Reading the Mind in the Eyes (Baron-Cohen et al., 2001).

Social desirability 12 items.

Impression Management Subscale of the Balanced Inventory of Differential Responding (BIDR) (Paulhus, 1984; Paulhus, 1995).

A59. What is the sample size for the research? How many participants/samples/data records do you plan to study in total? If there is more than one group, please give further details below.

Total UK sample size: 600

Total international sample size (including UK): 0

Total in European Economic Area:

Further details:

Please see Appendix A of research proposal for details of sites.

BPD=200

ED=200

Non-clinical controls=200

An ideal upper limit would be 900 participants.

A60. How was the sample size decided upon? If a formal sample size calculation was used, indicate how this was done, giving sufficient information to justify and reproduce the calculation.

Power calculations

Factor structure

The RFQ's factor structure will be investigated using exploratory factor analysis. Tinsley & Tinsley (1987) suggest a sample size of 200 participants fair and 300 participants good. Therefore, a minimum of 200 participants will be needed in each subsample to determine the factor structure of the 54-item RFQ. As the measure will be validated in BPD, ED and non-clinical populations, a minimum total of 600 participants are needed. An upper limit of 900 participants would present an ideal.

Confirmatory factor analysis to test a two-factor theoretical model will be conducted using the structural equation modelling (SEM) computer package AMOS 4.0 (Arbuckle & Wothke, 1999). Stevens (1986) suggests an adequately-powered SEM study requires 15 cases per variable. Between all the questionnaires used, there are 11 subscales/variables. A minimum of 165 participants per subsample, or 495 participants in total will be recruited for this study.

Correlational analyses

The validity of the RFQ will be determined by exploring how it correlates with related constructs. An a priori power analysis using G*Power indicates that a minimum of 134 participants will be needed to test two-tailed hypotheses where a medium effect size is expected.

The researcher will therefore aim to recruit a minimum of 600 participants so that all necessary analyses will be adequately powered.

A61. Will participants be allocated to groups at random?

Yes No

A62. Please describe the methods of analysis (statistical or other appropriate methods, e.g. for qualitative research) by which the data will be evaluated to meet the study objectives.

Analyses will be conducted within separate subsamples (BPD=Borderline Personality Disorder, ED=Eating Disorder, NCC=Non-Clinical Controls) and across the entire sample. The potential of variables such as SES, education level, and cognitive ability to confound analyses will be investigated and controlled for statistically as necessary.

Factor structure

The factor structure of the RFQ will be determined by conducting an exploratory factor analysis (principal components analysis) on each of the subsamples (ED, BPD, non-clinical controls) as well as on the whole sample.

Secondly, a confirmatory factor analysis using AMOS 4.0, a Structural Equation Modeling (SEM) computer package will be used to confirm the 'goodness of fit' of the proposed two-factor structure of the RFQ ('mentalization of self' and 'mentalization of other') in each of the three populations and then on the whole sample. A test of invariance of factor structure across groups will be conducted to see whether gender, socio-economic status, IQ, and clinical diagnosis affects factor structure.

Validity

The RFQ's validity will be assessed by conducting correlational analyses comparing it to related constructs. The subscales 'self' and 'other' as well as the total RFQ will be analysed separately first of all in BPD, ED, and NCC and then across the whole sample. Bonferonni corrections will be applied as necessary.

Reliability

Cronbach's alpha will test internal reliability of the two subscales, self and other, across the separate subsamples and the entire sample. Test-retest reliability will be established by correlating scores at Time 1 and Time 2 (3 weeks later).

Sensitivity to change

This will be analysed by within-group t-tests to see if there is a statistically significant difference between pre and post treatment scores on the RFQ.

Discriminant validity

Receiver Operating Curve analyses will be applied across the whole sample to determine whether the RFQ reliably distinguishes between clinical and non-clinical populations, and BPD from ED. The optimum clinical cut-off score on the RFQ will also be established. Between group t-tests will be applied to test whether there is a significant difference

in RFQ54 scores between clinical and non-clinical samples, between BPD and ED; between comorbid ED or BPD and non-comorbid forms of these disorders; between 'expert' mentalizers and other non-clinical controls; and between ED self-harmers and ED non-self harmers. The family-wise error rate inherent in multiple comparisons will be corrected statistically using the Bonferonni correction.

6. MANAGEMENT OF THE RESEARCH

A63. Other key investigators/collaborators. Please include all grant co-applicants, protocol co-authors and other key members of the Chief Investigator's team, including non-doctoral student researchers.

	Title	Forename/Initials	Surname
	Prof	Peter	Fonagy
Post	Freud Memorial Professor of Psychoanalysis		
Qualifications	PhD		
Employer	University College London		
Work Address	Psychoanalysis Unit, Research Department of Clinical, Educational and Health Psychology University College London Gower Street, London		
Post Code	WC1E 6BT		
Telephone	[REDACTED]		
Fax	[REDACTED]		
Mobile	[REDACTED]		
Work Email	[REDACTED]		

	Title	Forename/Initials	Surname
	Prof	Patrick	Luyten
Post	Professor of Clinical Psychology		
Qualifications	PhD		
Employer	University of Leuven		
Work Address	Department of Psychology Tiensestraat 102 - bus 03722 Leuven, Belgium		
Post Code	B-3000		
Telephone	[REDACTED]		
Fax	[REDACTED]		
Mobile	[REDACTED]		
Work Email	[REDACTED]		

	Title	Forename/Initials	Surname
	[REDACTED]	[REDACTED]	[REDACTED]
Post	Trainee Clinical Psychologist		
Qualifications	BSc		
Employer	University of Surrey		
Work Address	Department of Psychology, Faculty of Arts & Human Sciences AD Building University of Surrey Guildford		
Post Code	GU2 7XH		
Telephone	[REDACTED]		
Fax	[REDACTED]		

Mobile	
Work Email	[REDACTED]
	Title Forename/Initials Surname [REDACTED]
Post	Trainee Clinical Psychologist
Qualifications	BSc, MSc
Employer	University of Surrey
Work Address	Department of Psychology, Faculty of Arts & Human Sciences AD Building University of Surrey Guildford
Post Code	GU2 7XH
Telephone	[REDACTED]
Fax	
Mobile	
Work Email	[REDACTED]
	Title Forename/Initials Surname [REDACTED]
Post	Trainee Clinical Psychologist
Qualifications	BSc
Employer	University College London
Work Address	Research Department of Clinical, Educational & Health Psychology University College London Gower Street, London
Post Code	WC1E 6BT
Telephone	[REDACTED]
Fax	
Mobile	
Work Email	[REDACTED]
	Title Forename/Initials Surname [REDACTED]
Post	Trainee Counselling Psychologist
Qualifications	BSc
Employer	University of East London
Work Address	School of Psychology, The University of East London Stratford Campus Water Lane, London
Post Code	E15 4LZ
Telephone	[REDACTED]
Fax	
Mobile	
Work Email	[REDACTED]
	Title Forename/Initials Surname [REDACTED]
Post	Senior Research Tutor
Qualifications	PhD

Employer	University of Surrey
Work Address	Department of Psychology, Faculty of Arts & Human Sciences AD Building University of Surrey Guildford
Post Code	GU2 7XH
Telephone	[REDACTED]
Fax	
Mobile	[REDACTED]
Work Email	[REDACTED]
	Title Forename/Initials Surname [REDACTED]
Post	Post-doctoral researcher
Qualifications	MD
Employer	Anna Freud Centre
Work Address	Anna Freud Centre 12 Maresfield Gardens London
Post Code	NW3 5SU
Telephone	[REDACTED]
Fax	
Mobile	
Work Email	[REDACTED]

A64. Details of research sponsor(s)

A64-1. Sponsor

Lead Sponsor

- Status: NHS or HSC care organisation Commercial status: Non-Commercial
 Academic
 Pharmaceutical industry
 Medical device industry
 Local Authority
 Other social care provider (including voluntary sector or private organisation)
 Other

If Other, please specify:

Contact person

Name of organisation University College London
 Given name Peter
 Family name Fonagy
 Address Psychoanalysis Unit, Research Department of Clinical, Educational and Health Psychology
 Town/city University College London
 Post code WC1E 6BT

Country	UNITED KINGDOM
Telephone	[REDACTED]
Fax	[REDACTED]
E-mail	[REDACTED]

Is the sponsor based outside the UK?
 Yes No

Where the lead sponsor is not established within the UK, a legal representative in the UK may need to be appointed. Please consult the guidance notes.

A67. Has this or a similar application been previously rejected by a Research Ethics Committee in the UK or another country?

Yes No

Please provide a copy of the unfavourable opinion letter(s). You should explain in your answer to question A6-2 how the reasons for the unfavourable opinion have been addressed in this application.

A68. Give details of the lead NHS R&D contact for this research:

	Title Forename/Initials Surname
	Dr John Cape
Organisation	Camden & Islington Community Health Services NHS Trust
Address	St Pancras Hospital 4 St Pancras Way London
Post Code	NW1 0PE
Work Email	[REDACTED]
Telephone	[REDACTED]
Fax	[REDACTED]
Mobile	[REDACTED]

Details can be obtained from the NHS R&D Forum website: <http://www.rdforum.nhs.uk>

A69-1. How long do you expect the study to last in the UK?

Planned start date: 01/11/2010
 Planned end date: 01/11/2012
 Total duration:
 Years: 2 Months: 0 Days: 0

A71-1. Is this study?

Single centre
 Multicentre

A71-2. Where will the research take place? (Tick as appropriate)

England
 Scotland
 Wales
 Northern Ireland
 Other countries in European Economic Area

Total UK sites in study 11

Does this trial involve countries outside the EU?
 Yes No

A72. What host organisations (NHS or other) in the UK will be responsible for the research sites? *Please indicate the type of organisation by ticking the box and give approximate numbers of planned research sites:*

NHS organisations in England 6
 NHS organisations in Wales
 NHS organisations in Scotland
 HSC organisations in Northern Ireland
 GP practices in England
 GP practices in Wales
 GP practices in Scotland
 GP practices in Northern Ireland
 Social care organisations
 Phase 1 trial units
 Prison establishments
 Probation areas
 Independent hospitals
 Educational establishments 3
 Independent research units
 Other (give details) 2
 Psychologists professional network + community location eg cafes

Total UK sites in study:

A76. Insurance/ indemnity to meet potential legal liabilities

Note: in this question to NHS indemnity schemes include equivalent schemes provided by Health and Social Care (HSC) in Northern Ireland

A76-1. What arrangements will be made for insurance and/or indemnity to meet the potential legal liability of the sponsor(s) for harm to participants arising from the management of the research? *Please tick box(es) as applicable.*

Note: Where a NHS organisation has agreed to act as sponsor or co-sponsor, indemnity is provided through NHS schemes. Indicate if this applies (there is no need to provide documentary evidence). For all other sponsors, please describe the arrangements and provide evidence.

NHS indemnity scheme will apply (NHS sponsors only)
 Other insurance or indemnity arrangements will apply (give details below)

Sponsor University College London, sponsor's representative Prof Peter Fonagy. See attached letter.

Please enclose a copy of relevant documents.

A76-2. What arrangements will be made for insurance and/ or indemnity to meet the potential legal liability of the sponsor(s) or employer(s) for harm to participants arising from the design of the research? Please tick box(es) as applicable.

Note: Where researchers with substantive NHS employment contracts have designed the research, indemnity is provided through NHS schemes. Indicate if this applies (there is no need to provide documentary evidence). For other protocol authors (e.g. company employees, university members), please describe the arrangements and provide evidence.

NHS indemnity scheme will apply (protocol authors with NHS contracts only)

Other insurance or indemnity arrangements will apply (give details below)

Sponsor University College London, sponsor's representative Prof Peter Fonagy. See attached letter.

Please enclose a copy of relevant documents.

A76-3. What arrangements will be made for insurance and/ or indemnity to meet the potential legal liability of investigators/collaborators arising from harm to participants in the conduct of the research?

Note: Where the participants are NHS patients, indemnity is provided through the NHS schemes or through professional indemnity. Indicate if this applies to the whole study (there is no need to provide documentary evidence). Where non-NHS sites are to be included in the research, including private practices, please describe the arrangements which will be made at these sites and provide evidence.

NHS indemnity scheme or professional indemnity will apply (participants recruited at NHS sites only)

Research includes non-NHS sites (give details of insurance/ indemnity arrangements for these sites below)

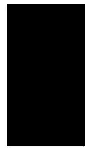
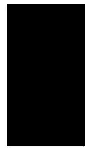
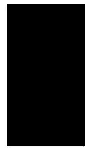



















Sponsor University College London, sponsor's representative Prof Peter Fonagy. See attached letter.




Please enclose a copy of relevant documents.

PART C: Overview of research sites

Please enter details of the host organisations (Local Authority, NHS or other) in the UK that will be responsible for the research sites. For NHS sites, the host organisation is the Trust or Health Board. Where the research site is a primary care site, e.g. GP practice, please insert the host organisation (PCT or Health Board) in the Institution row and insert the research site (e.g. GP practice) in the Department row.

Research site	Investigator/ Collaborator/ Contact
Institution name Barnet, Enfield & Haringey NHS Trust Department name St Ann's Hospital Street address St Ann's Road, Tottenham Town/city London Post Code N15 3TH	Title First name/ Initials Surname <div style="background-color: black; width: 100px; height: 40px; margin-top: 5px;"></div>
Institution name University College London Department name Clinical Psychology Programme Street address Gower Street Town/city London	Title First name/ Initials Surname <div style="background-color: black; width: 100px; height: 40px; margin-top: 5px;"></div>

Post Code	WC1E 6BT		
Institution name	University of Surrey	Title	
Department name	Clinical Psychology Programme, Department of Psychology, Faculty of Arts & Human Sciences	First name/Initials	
Street address	AD Building	Surname	
Town/city	Guildford		
Post Code	GU2 7XH		
Institution name	Salomons Christ Church University	Title	
Department name	Clinical Psychology Programme	First name/Initials	
Street address	Broomhill Road, Southborough	Surname	
Town/city	Tunbridge Wells		
Post Code	TN3 0TG		
Institution name	South West London & St Georges NHS Trust	Title	
Department name	Personality Disorder Treatment Team	First name/Initials	
Street address	Barnes Hospital	Surname	
Town/city	South Worples Way		
Post Code	SW14 8SU		
Institution name	South London & Maudsley NHS Trust	Title	
Department name	Intensive Psychological Treatment Service, York Clinic	First name/Initials	
Street address	47 Weston St	Surname	
Town/city	London		
Post Code	SE1 3RR		
Institution name	Surrey and Borders Partnership NHS Trust	Title	
Department name	Chertsey Mentalization Based Therapy Service	First name/Initials	
Street address	Villa 23, Resource Centre	Surname	
Town/city	St Peters Hospital, Chertsey		
Post Code	KT16 0QA		
Institution name	Private Psychoanalysts CPD group, c/o University of Surrey	Title	
Department name	Department of Psychology, Faculty of Arts & Human Sciences	First name/Initials	
Street address	AD Building	Surname	
Town/city	Guildford		
Post Code	GU2 7XH		
Institution name	South London cafes	Title	
Department name	NA	First name/Initials	
Street address	NA	Surname	
Town/city	NA		
Post Code	NA		
Institution name	Central & North West London NHS Trust	Title	

Department name	Personality Disorder Service	First name/ Initials	
Street address	Waterview Centre	Surname	
Town/city	7A Woodfield Rd, Kensington		
Post Code	W9 2NW		
Institution name	Lancashire Care NHS Foundation Trust	Title	
Department name	Personality Disorder Service	First name/ Initials	
Street address	Sceptre Point, Sceptre Way	Surname	
Town/city	Walton Summit		
Post Code	PR5 6AW		

PART D: Declarations**D1. Declaration by Chief Investigator**

1. The information in this form is accurate to the best of my knowledge and belief and I take full responsibility for it.
2. I undertake to abide by the ethical principles underlying the Declaration of Helsinki and good practice guidelines on the proper conduct of research.
3. If the research is approved I undertake to adhere to the study protocol, the terms of the full application as approved and any conditions set out by review bodies in giving approval.
4. I undertake to notify review bodies of substantial amendments to the protocol or the terms of the approved application, and to seek a favourable opinion from the main REC before implementing the amendment.
5. I undertake to submit annual progress reports setting out the progress of the research, as required by review bodies.
6. I am aware of my responsibility to be up to date and comply with the requirements of the law and relevant guidelines relating to security and confidentiality of patient or other personal data, including the need to register when necessary with the appropriate Data Protection Officer. I understand that I am not permitted to disclose identifiable data to third parties unless the disclosure has the consent of the data subject or, in the case of patient data in England and Wales, the disclosure is covered by the terms of an approval under Section 251 of the NHS Act 2006.
7. I understand that research records/data may be subject to inspection by review bodies for audit purposes if required.
8. I understand that any personal data in this application will be held by review bodies and their operational managers and that this will be managed according to the principles established in the Data Protection Act 1998.
9. I understand that the information contained in this application, any supporting documentation and all correspondence with review bodies or their operational managers relating to the application:
 - Will be held by the main REC or the GTAC (as applicable) until at least 3 years after the end of the study; and by NHS R&D offices (where the research requires NHS management permission) in accordance with the NHS Code of Practice on Records Management.
 - May be disclosed to the operational managers of review bodies, or the appointing authority for the main REC, in order to check that the application has been processed correctly or to investigate any complaint.
 - May be seen by auditors appointed to undertake accreditation of RECs.
 - Will be subject to the provisions of the Freedom of Information Acts and may be disclosed in response to requests made under the Acts except where statutory exemptions apply.
10. I understand that information relating to this research, including the contact details on this application, may be held on national research information systems, and that this will be managed according to the principles established in the Data Protection Act 1998.
11. I understand that the summary of this study will be published on the website of the National Research Ethics Service (NRES), together with the contact point for enquiries named below. Publication will take place no earlier than 3 months after issue of the ethics committee's final opinion or the withdrawal of the application.

Contact point for publication*(Not applicable for R&D Forms)*

NRES would like to include a contact point with the published summary of the study for those wishing to seek further information. We would be grateful if you would indicate one of the contact points below.

- Chief Investigator
 Sponsor
 Study co-ordinator

- Student
- Other – please give details
- None

Access to application for training purposes *(Not applicable for R&D Forms)*

Optional – please tick as appropriate:

- I would be content for members of other RECs to have access to the information in the application in confidence for training purposes. All personal identifiers and references to sponsors, funders and research units would be removed.

This section was signed electronically by Dr Alesia Perkins on 12/08/2010 05:56.

Job Title/Post: Clinical Psychologist/Honorary Research Assistant

Organisation: UCL

Email: 

Signature:

Print Name: Alesia Perkins

Date: 16/08/2010 (dd/mm/yyyy)

D2. Declaration by the sponsor's representative

If there is more than one sponsor, this declaration should be signed on behalf of the co-sponsors by a representative of the lead sponsor named at A64-1.

I confirm that:

1. This research proposal has been discussed with the Chief Investigator and agreement in principle to sponsor the research is in place.
2. An appropriate process of scientific critique has demonstrated that this research proposal is worthwhile and of high scientific quality.
3. Arrangements will be in place before the study starts for the research team to access resources and support to deliver the research as proposed.
4. Arrangements to allocate responsibilities for the management, monitoring and reporting of the research will be in place before the research starts.
5. The duties of sponsors set out in the Research Governance Framework for Health and Social Care will be undertaken in relation to this research.
6. I understand that the summary of this study will be published on the website of the National Research Ethics Service (NRES), together with the contact point for enquiries named in this application. Publication will take place no earlier than 3 months after issue of the ethics committee's final opinion or the withdrawal of the application.

This section was signed electronically by Peter Fonagy on 12/08/2010 17:39.

Job Title/Post: Head of the Research Department of Clinical, Educational and Health Psychology

Organisation: University College London

Email: [REDACTED]



National Research Ethics Service
South East Research Ethics Committee

South East Coast Strategic Health Authority
Preston Hall
Aylesford
Kent
ME20 7NJ

Tel: [REDACTED]
Fax: [REDACTED]

03 November 2010

Dr Alesia Perkins
Clinical Psychologist and
Honorary Research Assistant to Prof. Peter Fonagy
University College London
Psychoanalysis Unit
Gower Street
London
WC1E 6BT

Dear Dr Perkins

Study title: Development and validation of a new self-report measure of
mentalization: the 54-item Reflective Function Questionnaire
REC reference: 10/H1102/60
Protocol number: N/A
Amendment number: 11.10.10 Amendment 1
Amendment date: 11 October 2010

The above amendment was reviewed on 27 October 2010 (by the Sub-Committee in correspondence).

Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Support Numbers	1.0	16 August 2010
Invitation Letter	2.0	11 October 2010
Recruitment Poster	2.0	11 November 2010
Questionnaire: Feelings and Faces Questionnaire Pack	2.0	11 October 2010
Participant Consent Form	2.0	11 October 2010
Participant Information Sheet	2.0	11 October 2010
Notice of Substantial Amendment (non-CTIMPs)		11 October 2010
Covering Letter		11 October 2010

This Research Ethics Committee is an advisory committee to South East Coast Strategic Health Authority

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

R&D approval

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval of the research.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

10/H1102/60:

Please quote this number on all correspondence

Yours sincerely



Committee Co-ordinator

E-mail:

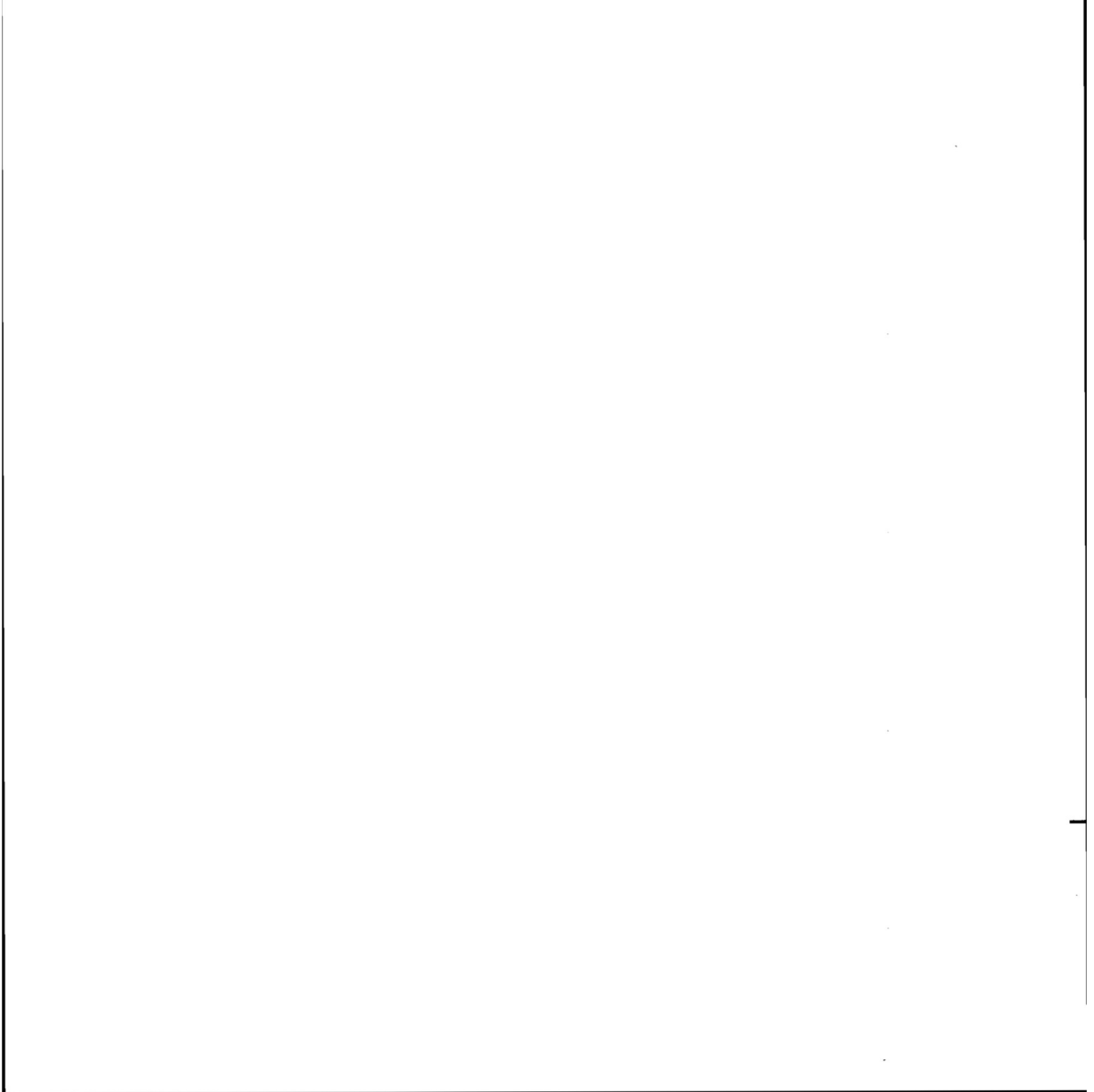


Enclosures:

List of names and professions of members who took part in the review

Copy to:

Peter Fonagy, University College London



Appendix 8: NHS ethical approval-time extension



Health Research Authority

NRES Committee London - South East

Bristol Research Ethics Committee Centre
Level 3, Block B
Whitefriars,
Lewins Mead,
Bristol
BS1 2NT

Tel: [REDACTED]

Fax: [REDACTED]

03 July 2013

Dr Alesia Perkins
Clinical Psychologist and Honorary Research Assistant to Prof. Peter Fonagy
University College London
Psychoanalysis Unit
Gower Street
London
WC1E 6BT

Dear Dr Perkins

Study title: Development and validation of a new self-report measure of mentalization: the 54-item Reflective Function Questionnaire
REC reference: 10/H1102/60
Amendment number: 2 dated 24 April 2013
Amendment date: 07 May 2013
IRAS project ID: 61627

The above amendment was reviewed by the Sub-Committee in correspondence.

Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Notice of Substantial Amendment (non-CTIMPs)		07 May 2013
Questionnaires		24 April 2013

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

A Research Ethics Committee established by the Health Research Authority

R&D approval

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval of the research.

Statement of compliance

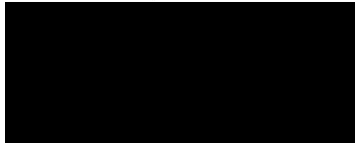
The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at <http://www.hra.nhs.uk/hra-training/>

10/H1102/60:

Please quote this number on all correspondence

Yours sincerely



pp 
Chair

E-mail: nrescommittee.london-southeast@nhs.net

Enclosures: List of names and professions of members who took part in the review

*Copy to: Dr John Cape, Camden & Islington Community Health Services NHS Trust
Peter Fonagy, University College London*

A Research Ethics Committee established by the Health Research Authority

NRES Committee London - South East

Attendance at Sub-Committee of the REC meeting

<i>Name</i>	<i>Profession</i>	<i>Capacity</i>
[REDACTED]	Physicist	Lay
	GP	Expert
	Pharmacist	Expert

Also in attendance:

<i>Name</i>	<i>Position (or reason for attending)</i>
[REDACTED]	Committee Coordinator

A Research Ethics Committee established by the Health Research Authority

Ethics Release Form for Student Research Projects

All students planning to undertake any research activity in the School of Arts and Social Sciences are required to complete this Ethics Release Form and to submit it to their Research Supervisor, **together with their research proposal clearly stating aims and methodology**, prior to commencing their research work. If you are proposing multiple studies within your research project, you are required to submit a separate ethical release form for each study.

This form should be completed in the context of the following information:

- An understanding of ethical considerations is central to planning and conducting research.
- Approval to carry out research by the Department or the Schools does not exempt you from Ethics Committee approval from institutions within which you may be planning to conduct the research, e.g.: Hospitals, NHS Trusts, HM Prisons Service, etc.
- The published ethical guidelines of the British Psychological Society (2009) Guidelines for minimum standards of ethical approval in psychological research (BPS: Leicester) should be referred to when planning your research.
- **Students are not permitted to begin their research work until approval has been received and this form has been signed by Research Supervisor and the Department's Ethics Representative.**

Section A: To be completed by the student

Please indicate the degree that the proposed research project pertains to:

BSc M.Phil M.Sc D.Psych n/a

Please answer all of the following questions, circling yes or no where appropriate:

1. Title of project

Differences in mentalising ability in individuals presenting with eating disorders with and without concurrent self-harm: a comparative study.

2. Name of student researcher (please include contact address and telephone number)

Angie Cucchi, City University, Northampton Square London EC1V 0HB
Tel. No. [REDACTED]

3. Name of research supervisor

Dr. Jacqui Farrants

4. Is a research proposal appended to this ethics release form? Yes No

5. Does the research involve the use of human subjects/participants? Yes No

If yes,

a. Approximately how many are planned to be involved?

A minimum of
58

b. How will you recruit them?

Participants awaiting to be assessed and/or start treatment will be recruited at several specialist eating disorder units (Appendix 4). If the researcher struggles to recruit enough participants before they start treatment, questionnaires can be administered to individuals already in treatment and the length of therapeutic involvement can be recorded and analysed as an independent variable.

Information on the study (Appendix 1) will be sent out in written format with clients' appointment letters, so that participants may make an informed choice about whether or not to participate. At their appointment at the clinic, each potential participant who wishes to participate in the study will be given a consent form, the questionnaires and a SAE, all contained in a larger envelope. Ideally, questionnaires will be completed on site and handed directly to the researcher or the associated clinician. Alternatively, participants who wish to take part can also complete the questionnaire at home and then return it directly to the researcher using the supplied SAE.

Contacts have also been made with several Eating Disorders Associations (Beat; Somerset and Wessex Eating Disorder Association; North London Eating Disorders Support Group) in order to recruit participants. All charities are involved in ongoing research and have websites advertising current projects. The researcher is planning to advertise her research project via a flyer (see attached). Individuals who are interested can contact the researcher through the website or directly through the email provided. Copies of the questionnaires and relevant information/consent forms can be sent to the eating disorder associations, emailed directly to the participant or filled in online.

c. What are your recruitment criteria?

(Please append your recruitment material/advertisement/flyer)

- Flyer/ advertisement on ED websites
- ED clinics

d. Will the research involve the participation of minors (under 18 years of age) or vulnerable adults or those unable to give informed consent? Yes No

d1. If yes, will signed parental/carer consent be obtained? Yes No

d2. If yes, has a CRB check been obtained? Yes No
(Please append a copy of your CRB check)

6. What will be required of each subject/participant (e.g. time commitment, task/activity)? (If psychometric instruments are to be employed, please state who will be supervising their use and their relevant qualification).

Participants will be asked to fill in a questionnaire pack which comprises of 5 questionnaires. Piloting the questionnaires with fellow students, non service-users, revealed it took 20 minutes to complete. It was felt, therefore, that allowing 30 minutes to service-users would be sufficient time, and not create an undue burden on participants.

7. Is there any risk of physical or psychological harm to the subjects/participants? Yes No

If yes,

a. Please detail the possible harm?

Although it is not expected that any distress befalls on participants as a result of filling in the questionnaires, provisions have been made in case it does occur. In fact, due to the nature of the topics to be examined and the vulnerability of the population in question, it is important to bear in mind the possibility that participants might become distressed or, indeed, tired as a result of filling out the questionnaires.

b. How can this be justified?

The justification for this research partly lies in recent claims suggesting that a lack of a mentalising stance might hinder the level of engagement in therapy (Bateman & Fonagy, 2004). Furthermore, justification for the study can also be found in the elevated mortality risk found in the eating disorder population and in the high drop-out rates found in both ED and SH, which make devising specific treatment for these client-groups a priority. By feeding back the results at the end of the study, and hearing about how this research could contribute to better understanding and future treatment for individuals presenting with ED with/without concurrent SH may provide some indirect benefit to participants. The process might encourage some participants to become more active agents in their recovery and this might foster a sense of satisfaction and achievement that they have contributed to this process.

What precautions are you taking to address the risks posed?

Piloting the questionnaires with fellow students, non service-users, revealed it took 20 minutes to complete. It was felt, therefore, that allowing 30 minutes to service-users would be sufficient time, and not create an undue burden on participants. Nevertheless, should piloting the study with service-users reveal that participants get over-tired, the researcher will drop two questionnaires. To safeguard very vulnerable people, individuals under 18, those highly distressed/suicidal and in-patients will not be approached. Consultant's clinical judgment will ensure that individuals who present with risk issues will not be approached for the study. Nevertheless, should a participant become distressed whilst with the researcher, she will first use her active-listening skills to contain the individual's emotions, check with them the feasibility of continuing with the research and, if necessary, and after having spoken to the participant him/herself, inform senior staff members. To avoid that the researcher will be caught in a dual-role, distressed participants will only be able to access emotional support through staff-members/external organisations. Nevertheless, the researcher will discuss with both the participant and the staff what further support can be given.

A list of telephone help-lines will also be provided to participants (Appendix 3). Where participants are recruited online, it will be unfeasible to screen for level of distress and/or suicidality. However, an online recommendation will feature the following message: "The following questionnaires cover topics which some people might find upsetting. If you are feeling very vulnerable, or have thoughts of hurting yourself, we recommend that you contact your GP or emergency services. Please DO take care and wait until you feel better before filling in these questionnaires. By filling in the questionnaires you consent to your data being used for research purposes".

8. Will all subjects/participants and/or their parents/carers receive an information sheet describing the aims, procedure and possible risks of the research, as well as providing researcher and supervisor contact details?

Yes

No

(Please append the information sheet which should be written in terms which are accessible to your subjects/participants and/or their parents/carers)

9. Will any person's treatment/care be in any way be compromised if they choose not to participate in the research?

Yes

No

10. Will all subjects/participants be required to sign a consent form, stating that they fully understand the purpose, procedure and possible risks of the research?

Yes

No

If no, please justify

If yes please append the informed consent form which should be written in terms which are accessible to your subjects/participants and/or their parents/carers)

11. What records will you be keeping of your subjects/participants? (e.g. research notes, computer records, tape/video recordings)?

Consent forms will have identifying details (name, surname and address).

12. What provision will there be for the safe-keeping of these records?

Anonymised data will be kept on a password-protected electronic database and will be destroyed after use; signed consent forms will be kept separately in a locked compartment. Only the researcher and, if necessary, the university internal supervisor will have access to the signed consent forms. No patient identifiable information will be stored electronically.

13. What will happen to the records at the end of the project?

Anonymised data and signed consent forms will be destroyed after use. This will be done by using a document shredder to ensure that the data will be disposed in such a way that there is no risk to confidentiality being compromised.

14. How will you protect the anonymity of the subjects/participants?

Questionnaires and consent forms will be pre-marked with individual matching numbers to ensure confidentiality. All answers on the questionnaires will be anonymous and confidential. Anonymised data will be kept on a password-protected electronic database and will be destroyed after use; signed consent forms will be kept separately in a locked compartment. Only the researcher and, if necessary, the university internal supervisor will have access to the signed consent forms. No patient identifiable information will be stored electronically.

15. What provision for post research de-brief or psychological support will be available should subjects/participants require?

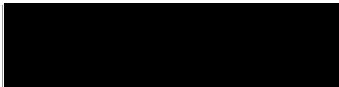
Should a participant become distressed whilst with the researcher, she will first use her active-listening skills to contain the individual's emotions, check with them the feasibility of continuing with the research and, if necessary, and after having spoken to the participant him/herself, inform senior staff members. To avoid that the researcher will be caught in a dual-role, distressed participants will only be able to access emotional support through staff-members or external organisations. Nevertheless, the researcher will discuss with both the participant and the staff what further support can be given. A list of telephone help-lines will also be provided to participants (Appendix 3). This will be particularly relevant to individuals filling in questionnaires online.

(Please append any de-brief information sheets or resource lists detailing possible support options)

If you have circled an item in **underlined bold** print or wish to provide additional details of the research please provide further explanation here:

N/A

Signature of student researcher



Date 05/02/13

CHECKLIST: the following forms should be appended unless justified otherwise

- Research Proposal
- Recruitment Material
- Information Sheet
- Consent Form
- De-brief Information

Section B: Risks to the Researcher

1. Is there any risk of physical or psychological harm to yourself? Yes No
If yes,

a. Please detail possible harm?

b. How can this be justified?

c. What precautions are to be taken to address the risks posed?

Section C: To be completed by the research supervisor

(Please pay particular attention to any suggested research activity involving minors or vulnerable adults. Approval requires a currently valid CRB check to be appended to this form. If in any doubt, please refer to the Research Committee.)

Please mark the appropriate box below:

Ethical approval granted

Refer to the Department's Research and Ethics Committee

Refer to the School's Research and Ethics Committee

Signature



Date

8/2/13

Section D: To be completed by the 2nd Departmental staff member

*(Please read this ethics release form fully and pay particular attention to any answers on the form where **underlined bold** items have been circled and any relevant appendices.)*

I agree with the decision of the research supervisor as indicated above

Signature



Date

15/02/13

Appendix 10: Number of cases excluded from analysis and cases with mean substitution

Number of people excluded from the analysis due to having more than 5% items missing

	<u>RFQ-54</u>	<u>PTS</u>	<u>KIMS</u>	<u>TAS</u>	<u>RMET</u>
CONTROL	0	0	4	4	4
ED_SH	0	5	5	7	8
ED_noSH	0	13	13	15	17

Number of people with mean substitution

	<u>RFQ-54</u>	<u>PTS</u>	<u>KIMS</u>	<u>TAS</u>	RMET
CONTROL	0	0	0	2	4
ED_SH	3	0	1	2	2
ED_noSH	6	2	2	0	3

Appendix 11: Z-scores for each measure before and after removing outliers

Z-scores for each measure before removing outliers

	GROUP	N	Skewness			Kurtosis		
			Statistic	Std. Error	Z score	Statistic	Std. Error	Z score
RFQ	EDSH	58	-0.35	0.31	-1.11	0.14	0.61	0.23
	EDnoSH	96	-0.50	0.24	-2.06	0.47	0.48	0.96
	CG	74	-0.60	0.27	2.14	0.10	0.55	0.19
	Mix sample	228	-0.62	0.16	-3.87	0.49	0.32	1.53
PTS	EDSH	53	-0.08	0.32	-0.25	-0.99	0.64	-1.54
	EDnoSH	84	-0.35	0.26	-1.34	-0.53	0.52	-1.02
	CG	74	-0.30	0.27	-1.08	0.00	0.55	0.00
	Mix sample	211	-0.52	0.16	-3.25	-0.15	0.33	-0.45
KIMS	EDSH	53	0.87	0.32	2.68	0.24	0.64	0.38
	EDnoSH	83	-0.02	0.26	-0.07	-0.83	0.52	-1.59
	CG	70	0.61	0.28	2.13	-0.16	0.56	-0.28
	Mix sample	206	0.24	0.16	1.50	-0.33	0.33	-1.00
TAS	EDSH	50	-0.71	0.33	-2.11	0.43	0.66	0.65
	EDnoSH	81	0.12	0.26	0.46	-0.24	0.52	-0.45
	CG	70	-0.05	0.28	-0.18	-0.11	0.56	-0.20
	Mix sample	201	0.18	0.17	1.05	-0.59	0.34	-1.73
RMET	EDSH	51	-0.73	0.33	2.19	1.73	0.65	2.63
	EDnoSH	81	-0.07	0.26	-0.28	-0.60	0.52	-1.13
	CG	70	-0.52	0.28	-1.82	-0.07	0.56	-0.13
	Mix sample	202	-0.47	0.17	-2.76	0.26	0.34	0.76
AGE	EDSH	58	1.06	0.31	3.41	0.50	0.61	0.81
	EDnoSH	97	0.77	0.24	3.20	-0.31	0.48	-0.64
	CG	74	0.42	0.27	1.55	-0.07	0.55	-0.12
	Mix sample	229	0.60	0.16	3.75	-0.37	0.32	-1.15

** Numbers in bold refer to distributions whose numbers are above 1.96 Z scores for samples < 100 (CG, ED_noSH, ED_SH) and above 3.29 for samples between 100 and 300 (Mix sample) (Fifa-Shaw, 2011).

Z-scores for each measure after removing outliers

	GROUP	N	Skewness			Kurtosis		
			Statistic	Std. Error	Z score	Statistic	Std. Error	Z score
RFQ	EDSH	58	-0.15	0.31	-0.48	-0.56	0.61	-0.91
	ED no SH	96	-0.16	0.24	-0.66	-0.53	0.48	-1.08
	CG	74	-0.41	0.27	-1.49	-0.56	0.55	-1.02
	Mix sample	228	-0.41	0.16	-2.56	-0.26	0.32	0.81
PTS	EDSH	53	-0.05	0.32	-0.16	-1.05	0.64	-1.63
	ED no SH	84	-0.25	0.26	-0.96	-0.79	0.52	-1.52
	CG	74	-0.1	0.27	-0.35	-0.51	0.55	-0.92
	Mix sample	211	-0.476	0.167	-2.85	-0.25	0.33	-0.75
KIMS	EDSH	53	0.72	0.32	2.2	-0.17	0.64	-0.27
	ED no SH	83	-0.02	0.26	-0.09	-0.82	0.52	-1.56
	CG	70	0.52	0.28	1.83	-0.35	0.56	-0.63
	Mix sample	206	0.17	0.16	1.06	-0.46	0.33	-1.39
TAS	EDSH	50	-0.44	0.33	-1.32	-0.43	0.66	-0.65
	ED no SH	81	0.04	0.26	0.17	-0.51	0.52	-0.96
	CG	70	0.01	0.28	0.06	-0.29	0.56	0.51
	Mix sample	201	0.2	0.17	1.17	-0.72	0.34	-2.11
RMET	EDSH	51	-0.07	0.33	-0.22	-0.61	0.65	-0.94
	ED no SH	81	-0.02	0.26	-0.07	-0.71	0.52	-1.34
	CG	70	-0.32	0.28	-1.13	-0.62	0.56	-1.1
	Mix sample	202	-0.23	0.17	-1.35	-0.43	0.34	-1.26
AGE	EDSH	58	1.06	0.31	3.41	0.5	0.61	0.18
	ED no SH	97	0.77	0.24	3.2	-0.31	0.48	-0.64
	CG	74	0.42	0.27	1.56	-0.07	0.552	-0.12
	Mix sample	229	0.6	0.16	3.75	-0.37	0.32	-1.15

Numbers in bold refer to distributions whose numbers are above 1.96 Z scores for samples < 100 (CG, ED_noSH, ED_SH) and above 3.29 for samples between 100 and 300 (Mix sample) (Fifa-Shaw, 2011).

Appendix 12: Z-scores -.length of therapy´ before and after transformations

Z-scores for length of therapy before log transformation.

	GROUP	N	Skewness			Kurtosis		
			Statistic	Std.		Statistic	Std.	
				Error	Z score		Error	Z score
Length	EDSH	58	3.16	0.31	10.19	10.85	0.61	17.78
of	ED no SH	97	2.32	0.24	9.66	6.18	0.48	12.85
therapy	CG	74	2.29	0.27	8.48	4.66	0.55	8.47
	Mix sample	229	3.49	0.16	21.7	15.45	0.32	48.28

** Numbers in bold refer to distributions whose numbers are above 1.96 Z scores for samples < 100 (CG, ED_noSH, ED_SH) and above 3.29 for samples between 100 and 300 (Mix sample) (Fifa-Shaw, 2011).

Z-scores for length of therapy after log transformation.

	GROUP	N	Skewness			Kurtosis		
			Statistic	Std.		Statistic	Std.	
				Error	Z score		Error	Z score
Length	EDSH	58	-0.9	0.31	-2.9	-0.24	0.61	-0.39
of	EDnoSH	97	-0.76	0.24	-3.16	-0.48	0.48	-1
therapy	CG	74	0.54	0.27	2	-1.42	0.55	-2.58
	Mix sample	229	-0.34	0.16	-2.12	-1.35	0.32	-4.21

** Numbers in bold refer to distributions whose numbers are above 1.96 Z scores for samples < 100 (CG, ED_noSH, ED_SH) and above 3.29 for samples between 100 and 300 (Mix sample) (Fifa-Shaw, 2011).

C. Section three

Professional practice

A Journey Through the `Rational Mind_ and the `Paradoxical Logic
of the Unconscious_:

An Integrative Case Study.

The client referred to in this report provided full consent for details to be used. All identifying details used in this report have been changed in order to preserve confidentiality.