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Mahoney-Davies, Gerwyn

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Research Portfolio Submitted in Part Fulfilment of the Requirements for the Degree of Doctorate in Clinical Psychology

Gerwyn Mahoney-Davies

Doctorate in Clinical Psychology

University of Bath
Department of Psychology

May 2016

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Contents

Abstracts.....	5
Main Research Project	5
Service Improvement Project.....	6
Literature Review.....	6
A Critical Review of the Maintenance Factors Proposed by Cognitive-Behavioural Models of Body Dysmorphic Disorder.	7
Abstract	8
Introduction.....	9
Method	11
Results.....	12
Discussion	23
References.....	28
A Thematic Analysis of Emotional and Psychological Experiences of People with Heart Failure.	33
Abstract	34
Introduction.....	35
Background	36
Method	38
Results.....	40
Discussion	48
Limitations	50
Conclusions.....	50
Relevance to clinical practice.....	51
References.....	52
Socialisation to the Model in Adolescent Cognitive Behavioural Therapy: Measurement and Relationship with Clinical Outcomes.....	55
Abstract	56
Introduction.....	57
Method	59
Results.....	64
Discussion	68
References.....	71
Socialisation to the Model in Adolescent Cognitive Behavioural Therapy: Measurement and Relationship with Clinical Outcomes – An Executive Summary.	73
Connecting Narrative	75
Acknowledgements.....	82

Appendix A: Papers excluded from the critical literature review.	83
Appendix B: Table of papers included in the critical literature review.....	84
Appendix C: Criteria for service improvement project group selection.....	98
Appendix D: Interview schedule for service improvement project.....	99
Appendix E: A thematic map for the service improvement project.	102
Appendix F: Research and Development approval for the service improvement project.	103
Appendix G: Socialisation Interview schedule.....	104
Appendix H: The CBT Skills task.....	106
Appendix I: Socialisation interview scoring criteria	108
Appendix J: CBT Skills task scoring.....	113
Appendix K: Letter to clinicians requesting data	115
Appendix L: Young person information sheet	117
Appendix M: Parent information sheet.....	119
Appendix N: Clinician information sheet.....	121
Appendix O: NHS ethical approval for main research project.....	123
Appendix P: Author Guidelines – Body Image.....	128
Appendix Q: Author Guidelines – Journal of Clinical Nursing	130
Appendix R: Author Guidelines – Behavioural and Cognitive Psychotherapy	132

Abstracts

Main Research Project

Background:

Socialising a client to the cognitive behavioural model is advised in almost every cognitive behavioural therapy textbook but there is limited evidence for whether socialisation is measurable or important in terms of outcomes.

Aims:

To determine whether socialisation to the model could be measured in a sample of young people who have completed CBT and to explore whether this construct is important in relation to clinical outcomes.

Methods:

Sixteen participants (mean age 14.9 years, 75% female) completed a semi-structured socialisation interview and a novel written measure of socialisation. They rated their subjective improvement using the Clinical Global Impression improvement subscale. Treating clinicians were asked to provide participant routine outcome measure scores, subjective ratings of participant socialisation and their Clinical Global Impression improvement subscale score.

Results:

A moderate but non-significant correlation was found between the novel written measure of socialisation and clinician rating of socialisation ($r = .37$) and greater total socialisation was associated with greater percentage change on routine outcome measures ($r = .42$) although simple clinician rating of socialisation was also associated with percentage change ($r = .42$). None of these correlations were significant, however, probably due to the small sample size.

Conclusions:

A small sample size precludes conclusions being made but useful ways of improving research in this newly developing area were learned and discussed.

Service Improvement Project

Aims and objectives: To understand the emotional and psychological experiences of heart failure patients in a busy NHS service.

Background: People with heart failure often experience depression, anxiety and other emotional and psychological difficulties. Their quality of life is reduced. Qualitative studies attempting to understand this have reported conflicting findings.

Design: A mixed methods approach was taken.

Methods: Ten participants were asked to complete the PHQ-9 and GAD-7, rate their level of concern about their mood, anxiety, quality of life and social functioning. They completed a semi-structured interview about their experience of living with heart failure and the emotional and psychological impact of this. The interview was analysed thematically.

Results: Participants scored in the moderate range on both depression and anxiety measures. They were more concerned about their mood, anxiety, quality of life and social functioning at present compared to before the onset of heart failure. Themes present in the interview data were changes to self and others; emotional reactions; thoughts about death; expectations for the future and hospital experiences.

Conclusions: People with heart failure report moderate levels of depression and anxiety, significant changes in their lives and display varying emotional reactions to these. People have clear expectations for the future and impose limits on their life.

Relevance to clinical practice: This study contributes depth to the understanding of the psychological and emotional experience of heart failure patients in busy services. Inadvertently it also describes a relatively young sample of heart failure patients.

Literature Review

Cognitive behavioural therapy (CBT) has shown promising results as a treatment for body dysmorphic disorder (BDD). This review investigates the evidence for the factors suggested to maintain BDD in the two predominant CBT models. PsychInfo and MEDLINE searches were conducted using terms from the CBT maintenance models which yielded 33 papers. All maintenance factors had been investigated at least once, with mixed support indicated for most factors. The behavioural factors have received the most research support and there is good evidence that safety-seeking behaviours such as avoidance, rumination and rituals are common in BDD and less clear evidence for other factors. However, as yet no studies have investigated the extent to which these factors maintain symptoms of BDD.

Critical Literature Review:

**A Critical Review of the Maintenance Factors Proposed
by Cognitive-Behavioural Models of Body Dysmorphic
Disorder.**

Gerwyn Mahoney-Davies, Clinical Psychologist in Training,

Department of Clinical Psychology, University of Bath, Claverton Down, Bath, BA2 7AY.

Email: G.Mahoney-Davies@bath.ac.uk. Tel: 01225 385506.

Supervisors: Dr James Gregory and Dr Emma Griffith

Department of Clinical Psychology, University of Bath, Claverton Down, Bath, BA2 7AY.

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Intended Journal: Body Image – this journal is interested in reviews pertinent to body issues and many of the key articles included in the review were published in this journal.

Abstract

Cognitive behavioural therapy (CBT) has shown promising results as a treatment for body dysmorphic disorder (BDD). This review investigates the evidence for the factors suggested to maintain BDD in the two predominant CBT models. PsychInfo and MEDLINE searches were conducted using terms from the CBT maintenance models which yielded 33 papers. All maintenance factors had been investigated at least once, with mixed support indicated for most factors. The behavioural factors have received the most research support and there is good evidence that safety-seeking behaviours such as avoidance, rumination and rituals are common in BDD and less clear evidence for other factors. However, as yet no studies have investigated the extent to which these factors maintain symptoms of BDD.

Introduction

Body dysmorphic disorder (BDD) is characterised by a preoccupation with an 'imagined' defect in appearance resulting in clinically significant distress or impairment (APA, 2013). Individuals experiencing BDD are typically concerned that one or more body features are unattractive, flawed, asymmetrical or disproportionate. This could be any part of the body, however it is most frequently focused on the skin, hair or facial features. This concern is associated with time-consuming behaviours in an attempt to examine, disguise or correct the perceived flaws. This could include excessive 'mirror gazing', grooming, skin-picking, reassurance seeking, dieting or seeking cosmetic surgery (Veale, 2004b).

Cognitive-behavioural therapy (CBT) shows promise as a treatment approach for BDD (Neziroglu & Khemlani-Patel, 2002; Wilhelm et al., 2014) and is recommended by the National Institute for Health Care Excellence (NICE) as an evidence-based treatment (NICE, 2006). CBT aims to provide an explanatory framework for symptoms of BDD and is based on the principle that an individual's thoughts, feelings and behaviours influence the development and maintenance of symptoms.

In CBT 'maintenance' can be defined as 'the psychological processes which keep a problem going' (Westbrook, Kennerley, & Kirk, 2007, p. 45) however there is a paucity of research outlining what clinicians and researchers mean by the term. Moorey (2010) lists selective attention, worry, rumination, avoidance, reassurance seeking and safety-seeking behaviours as examples of possible maintenance factors that are present in most CBT formulations. Further, maintenance factors are often presented diagrammatically, usually inter-related and form a vicious cycle (Westbrook et al., 2007). Maintenance factors typically prevent disconfirmation of beliefs or act as self-fulfilling prophecies and are usually the target for treatment in therapy.

There are disorder-specific maintenance models including eating disorders (Fairburn, Cooper, & Shafran, 2003) and social anxiety disorder (Hofmann, 2007). Indeed, Fairburn et al. (2003) updated a prior CBT maintenance model of eating disorders to include additional maintaining factors. This new model accounts for a greater proportion of variance in eating-disorder behaviour than the original (Dakanalis et al., 2015) suggesting that maintaining factors are important in the real-life experience of people with mental health difficulties. In the eating disorder literature there is an active search for potentially unaccounted for maintenance factors using prospective methods (e.g. Bohon, Stice, and Burton (2009)) in the hope that discovering unknown maintenance factors could uncover new treatment targets and improve treatment efficacy. This is not happening in the BDD

literature and there is a need for a review of the evidence for the maintenance factors currently proposed by the two primary CBT models that have been proposed by Veale (Veale, 2001, 2004a; Veale et al., 1996) and Wilhelm (Wilhelm, Buhlmann, Hayward, Greenberg, & Dimaite, 2010; Wilhelm, Phillips, & Steketee, 2013), which are listed in Table 1.

Table 1: Summary of maintenance factors proposed by two CBT models

Wilhelm et al. (2013)¹	Veale (2001)
Exaggerated meaning and importance of imperfections	Negative appraisals of body image
Selective attention	Selective attention
Misinterpretation of visual information	Processing oneself as an aesthetic object
Over-focus on detail	Comparison with ideals
Ritualistic behaviour	Rumination
Avoidance	Safety-seeking behaviours

¹Terms used here are derived from Wilhelm, Phillips, Fama, Greenberg, and Steketee (2011) which first outlined the model.

The Wilhelm model proposes that people with BDD misinterpret visual information such as glances from strangers as being abnormal or threatening in some way. They selectively attend to the areas of their body with perceived flaws in a detailed, focused way and pay less attention to the whole or to other aspects of the situation that may possibly disconfirm their interpretations. They take this distorted information and evaluate it in ways that have implications for their character (i.e. “My nose is huge. I’m obviously not worth the time of day”) and perform ritualistic behaviours such as checking or examining their flaws or even trying to ‘fix’ them. They may also avoid people, places or conversations, cover their perceived flaw or avoid looking at themselves in mirrors. Veale’s model similarly proposes that people selectively attend to self-relevant information and negatively appraise this (Veale, 2001, 2004a). The Veale model, however, specifies that people may ruminate on this appraisal and ruminatively compare themselves with their ideal self and engage in safety-seeking behaviours which may be similar to the above. This occurs in the context of people with BDD processing themselves as aesthetic objects, or having extreme self-focussed attention on a distorted image of themselves. Veale also incorporates ‘meta-therapy’-type factors, including metacognition and issues around the

'self' into the model. Several factors within both models could be described as safety-seeking behaviours (Salkovskis, 1991). In this regard they may reduce anxiety or distress in the short term but maintain symptoms over longer periods by preventing disconfirmation of beliefs. Although there are small differences between the two models in terms of emphasis, they largely propose similar maintaining processes that can be broadly categorised as behavioural, cognitive and perceptual and attentional factors, as is a common feature in cognitive-behavioural models.

Although several reviews of BDD exist, including a general overview of the features of BDD (Fang & Wilhelm, 2015) and a comparison with other diagnoses (Fang & Hofmann, 2010; Hartmann, Greenberg, & Wilhelm, 2013), to date no review has been conducted examining the evidence for maintaining factors proposed by the two CBT models for BDD. Fang and Wilhelm (2015) helpfully evaluate CBT models as part of their paper and the current review proposes to further this by conducting a replicable literature search to identify which elements of the CBT models have been examined either experimentally or directly by other methods.

The aim of this paper is to review studies which have investigated the maintenance factors proposed by the two foremost models of BDD. An overview of the relative strengths of the two models and recommend areas for further investigation will be outlined.

Method

Search strategy

PubMed and PsycInfo were searched in March 2015 for peer reviewed articles with "body dysmorphic disorders" as the MeSH Major Topic for PubMed and the Index term for PsycInfo. This was combined with a title/abstract "OR" search for all of the keywords in the CBT formulation models (the full search string is available from the author). As body dysmorphic disorder was only added to MeSH in 2010 it was searched as a title/abstract search in PubMed and combined with the above terms. The Cochrane database was also searched but no papers were found.

Inclusion and exclusion criteria

Studies were included in the review if they met the following criteria 1) published in English, 2) published in a peer reviewed journal, 3) directly investigated one or more of the hypothesised maintaining factors referred to in table 1 4) used either a) a clinical sample of people with BDD or b) a non-clinical BDD analogue sample. Papers that were

purely descriptive and did not directly investigate proposed maintaining factors such as review papers were not included. Papers investigating neural correlates of BDD such as MRI studies were not included. Treatment studies were not included as they would not have directly investigated specific maintaining factors. Papers examining general visual processing were not included.

Screening and selection

The searches were combined in Endnote x7 (Reuters, 2013) and duplicates were removed. The titles of the remaining articles were scrutinised for eligibility by the first author using the criteria outlined above and papers that clearly did not meet the inclusion criteria were excluded. The abstracts of the remaining articles were read and papers that did not meet inclusion criteria were further excluded. Where it was not clear whether an article met criteria the full text of the paper was downloaded. If it was still not clear a consensus decision was made by the authors. The full text of the remaining papers was downloaded and the references were screened for any papers that had not been identified in the original search.

Results

The initial searches returned a total of 827 papers from the two databases. Seven hundred and eighteen papers remained after removing duplicates and 106 potentially eligible papers were identified from the titles. The abstracts of these papers were reviewed and 42 papers were potentially eligible. Twenty five of these papers met full inclusion criteria. Twelve of the remaining papers were excluded and included MRI studies, neuropsychological descriptive studies, face recognition and case studies (see appendix A). A further three papers were found after checking the references of the included studies, resulting in 33 papers being included in the final sample. A table describing the studies can be found in appendix B.

Several studies investigated more than one proposed maintaining factor. Where this occurred the study is included in each relevant section. Each maintaining factor will be addressed individually. Maintenance factors can be loosely categorised into behavioural, cognitive and perceptual and attentional factors.

Behavioural factors

Avoidance

Studies have suggested that non-clinical samples of people high in BDD symptoms report a stronger desire to avoid looking at mirrors than those with low BDD symptoms (Clerkin & Teachman, 2009) and report actual avoidance of mirrors more often than non-clinical (Veale & Riley, 2001; Windheim, Veale, & Anson, 2011) and clinical (Kollei, Brunhoeber, Rauh, de Zwaan, & Martin, 2012) samples. They also experience urges to continue looking (Windheim et al., 2011) suggesting that people with BDD experience complex emotions around mirrors avoidance which makes it both rewarding and distressing.

There are issues with measurement in these studies. Veale and Riley (2001) describe a novel self-report mirror gazing questionnaire completed by a reasonable number of people (107, 52 with BDD) but their control sample was recruited from 'personal contacts' and apart from being matched on age and gender, no other descriptive characteristics which could inform the similarity of the groups were reported. There is no information about how the questions were derived, how many questions there were, their reliability or validity. The study presents statistics for differences between groups on most individual questions without controlling for multiple comparisons. This questionnaire was later adapted for use in the Windheim et al. (2011) and Clerkin and Teachman (2009) studies although neither report how they adapted it.

Investigations into behaviours in front of a mirror report that people with BDD avoid mirrors more than controls (Buhlmann, Teachman, Naumann, Fehlinger, & Rief, 2009; Kolei & Martin, 2014). Clerkin and Teachman (2009) report that their sample of undergraduates high in BDD symptoms did not sit further away from a mirror than those low in BDD symptoms. However, people with either BDD or depression tended to look away from a mirror more often than controls when asked to look at their reflection (Kolei & Martin, 2014). Buhlmann et al. (2009) found that people with BDD displayed more avoidance by choosing to end the task earlier than both a sub-clinical and non-clinical sample. Similar findings between the latter two studies support the finding that people with BDD are likely to avoid mirrors more than non-clinical controls but possibly not more than people with depression.

There is evidence that people with BDD report engaging in more general avoidant behaviours such as camouflaging than non-clinical controls, but not clinical samples of people with eating disorder (Kolei et al., 2012; Lambrou, Veale, & Wilson, 2012). There is evidence that engagement in these avoidant behaviours is related to higher distress in people with BDD (Lambrou et al., 2012) however the novel 'Physical Appearance Worries Scale', which was used in this study, has not been reported more widely than this single

study so it is not clear the extent to which this finding is generalizable. The questionnaire demonstrates good internal consistency, was tested using a reasonable sample of 150 people and seemingly has good validity, however, so it warrants some confidence in its findings.

There is suggestion that people use avoidance strategies such as distraction in response to unpleasant images (Cooper & Osman, 2007) and, contrary to predictions, there is some evidence that this kind of image suppression can reduce frequency, discomfort and duration of intrusions in students with high BDD symptoms (Onden-Lim & Grisham, 2012). The sample of female Australian undergraduates used by Onden-Lim and Grisham is somewhat different from other studies in the literature.

People with BDD do not tend to avoid eye contact more than people with social phobia or controls according to eye-tracking software (Grochowski, Kliem, & Heinrichs, 2012). There was no difference between people with social phobia and controls, which is in contrast to literature reporting increased eye avoidance in people with social phobia (Machado-de-Sousa et al., 2010). The researchers suggest their collection of sad face stimuli used in this analysis may not have been aversive enough and that angry faces may have produced different results.

'Mirror avoiders' tend to pay more attention to the area of their own face they find most attractive but the area of an unfamiliar face corresponding with their own most disliked feature (Greenberg, Reuman, Hartmann, Kasarskis, & Wilhelm, 2014). Counterintuitively, this suggests that some people with BDD may have a positive self-serving bias toward their attractive features although this does not correspond with other findings (Clerkin & Teachman, 2009; Thomas & Goldberg, 1995). This effect was not found in the 44% of the sample not classed as 'mirror avoiders' so this effect, if real, may be limited to people who report mirror avoidance. The small sample in this study meant that each group in this analysis had around ten participants which may not give adequate power considering the researchers controlled for both gender and dwell time.

In summary, people with BDD report strong urges to both avoid and continue using mirrors although measurement in these studies is somewhat flawed. Behavioural measurement of mirror avoidance has produced mixed findings but seems likely that people with BDD behaviourally avoid mirrors more than controls. People with BDD report engaging in more avoidant behaviours including camouflaging and distraction. Eye-tracking studies have produced mixed findings. Overall there are many papers

investigating avoidance but findings are often contradictory, counter-intuitive or are based on novel measures so it is not possible for any confident conclusions to be made until further replication and investigation is conducted.

Rituals

Veale and Riley (2001) report that BDD and non-clinical controls engage in frequent mirror checks but people with BDD are more likely to do this daily, for longer on average and longer maximum lengths of sessions. The groups also report similar behaviours when in front of the mirror for a long session. However, people with BDD are more likely to compare what they see with a mental image of how they think they should ideally look or try to see something different in the mirror. People with BDD report experiencing more distress before and after long gazes, and if the urge to check a mirror is resisted, than people without BDD. The amount of distress reported by the BDD group is higher for mirror gazing than resisting an urge to mirror gaze which contrasts with the BDD sample's belief that resisting an urge will make them feel worse. BDD participants reported that mirror gazing had caused significant incidents such as road traffic accidents. They reported reasons for looking in a mirror such as "to pull ugly faces to prove how disgusting I am".

People with BDD are more likely to end mirror gazing sessions based on internal rather than external events such as feeling frustrated rather than having finished shaving (Baldock, Anson, & Veale, 2012). Other evidence suggests that both people with and without BDD experience distress and self-focused attention when looking in a mirror, although people with BDD experienced significantly more (Windheim et al., 2011). This means that contrary to Veale and Riley (2001), the control group in the Windheim study report experiencing distress and self-focused attention during mirror gazes which raises questions as to which control group is most representative of the general population. The latter study recruited a control sample of 25 people through a university volunteer pool and an invitation email to staff and students at a different university whereas the former recruited 55 controls through 'personal contacts'. Fifty-six percent of the Windheim control group report engaging in long mirror sessions compared to 30% of the Veale and Riley control group which suggests that even if both are representative of the general public they may differ from one another, limiting comparison between studies.

There is evidence that people with BDD report more frequent and distressing mirror checking, grooming, reassurance-seeking, comparison with others and skin picking than controls (Lambrou et al., 2012) although this is based on the Physical Appearance

Worries Scale, discussed above. Women with low body satisfaction rate their own attractiveness lower after gazing at their own face but rate others' attractiveness higher after gazing at their face. This finding is reversed in women with high body satisfaction (Mulken & Jansen, 2009). These data all come from self-report questionnaires which may not be an appropriate measure of behaviour. Neziroglu, Hickey, and McKay (2010) report that people with BDD report less disgust over five repeated mirror gazing trials although several issues around measurement, design and data presentation mean this finding should be considered with caution until it is replicated.

People with BDD engage in more compulsive checking than people with anorexia nervosa and controls and use thought control strategies such as worrying, giving in to impulse and confrontation more than controls when confronted with intrusive or worrying thoughts (Kollei et al., 2012).

In summary, evidence for rituals in BDD is almost exclusively limited to mirror gazing, which is well-described but further investigation into other common ritualistic behaviours such as skin picking or repetitively measuring body features is required.

Rumination

Kollei and Martin (2014) found that people with BDD report higher post-event processing than both the clinical (depression) and non-clinical control groups. They asked participants to verbalise their thoughts in front of a mirror using a 'thinking aloud' approach and participants completed a follow-up Post-Event Processing Questionnaire (Rachman, Grüter-Andrew, & Shafran, 2000) which has been validated in non-clinical samples but not in a sample of people with BDD. No further information is reported. This is encouraging and the results are in the direction expected however further work exploring the role of rumination in maintaining body dysmorphic disorder is required.

Cognitive factors

Negative appraisal of body image

An experimental study with reasonable sample size found that people with BDD more frequently verbalise overall body-related and negative body-related cognitions but less frequently verbalise positive body-related cognitions when exposed to a mirror compared to clinical and non-clinical controls. (Kollei & Martin, 2014).

A questionnaire study of body image in people with BDD and controls with and without aesthetic training found that people without BDD described their perceived defects in

terms relating to size, shape, symmetry and proportion however people with BDD used more negative, emotive and morally based descriptions such as 'ugly', 'disgusting', 'awful' and 'wrong' (Lambrou et al., 2012). A similar pattern was found when participants were asked to describe their ideal feature. A severe sample of people with BDD report forming negative judgements about themselves based on their mental images (Cooper & Osman, 2007). Such judgements include thoughts that they were unattractive, worthless, inferior or a freak. These were evidenced by looking in a mirror, using negative comments from others, body sensations, their thoughts or appearance and the media.

In summary, three varied studies report negative appraisals of body image. Of these, the strongest finding suggests that people with BDD report fewer positive body-related cognitions when exposed to a mirror and overall report more negative body-related cognitions.

Exaggerated meanings of imperfections

A questionnaire-based study found that individuals with BDD rated attractiveness as more important than controls (Anson, Veale, & de Silva, 2012). Whilst both groups rated attractiveness as important, the BDD group rated the importance of attractiveness as high for both the whole body and specific features that they are concerned with, whereas the control group rated the specific features as less important. The authors concluded that this disproportionately high level of importance attached to specific body parts is a crucial feature of BDD however the use of a novel questionnaire limits the conclusions that can be drawn.

The meaning of imperfections have also been investigated by a series of studies examining implicit beliefs. The data from the first set of studies suggest that, contrary to predictions, compared to controls, people with BDD do not hold different implicit beliefs about attractiveness being important, despite explicit beliefs being different (Buhlmann, Teachman, Gerbershagen, Kikul, & Rief, 2008; Clerkin & Teachman, 2008). These studies used the Implicit Association Task (Greenwald, McGhee, & Schwartz, 1998) and after a series of null findings concluded the task was not appropriate to address the hypotheses. This task was then adapted but produced similar findings (Buhlmann et al., 2009).

This task was then replaced with the Go/No-Go Association Task (Nosek & Banaji, 2001) and an extra control group of people with dermatological conditions was included (Buhlmann, Teachman, & Kathmann, 2011). As previously, people with BDD explicitly

rated physical attractiveness as more important than the other groups, however data from this task also suggested an implicit association belief between attractiveness and importance. The explicit and implicit beliefs were correlated ($r = .24$) and a logistic regression found that both explicit and implicit beliefs predicted BDD status 76% correctly. The gender balance in this study was closer to representative than the other studies in this series (66% female compared to 80-95% female). These findings need to be replicated otherwise there could be risk of confirmation bias. These studies investigate people with BDD's beliefs about attractiveness rather than their beliefs about imperfections. Whilst these may be related, no studies have directly investigated this. Also, the studies have mostly been published by the same German research team so validation and replication in different clinical samples is required before these findings can be considered evidence-based. Despite these limitations, the studies used well established experimental tasks and reasonable sample sizes.

In summary, methodological concerns limit possible conclusions however it is likely that people with BDD both explicitly and implicitly associate attractiveness with importance. It is not known how closely this is related to beliefs about imperfections being important or the kinds of exaggerated beliefs that people report about imperfections.

Comparison with ideals

The Veale model proposes that people with BDD have idealised standards that they strive to attain but perceive themselves as missing. This discrepancy between ideal and achieved standards has been investigated using principles of self-discrepancy theory (Higgins, 1987). People with BDD show a discrepancy between how they perceive their appearance and both how they believe they should look and how they would like to look (Veale, Kinderman, Riley, & Lambrou, 2003). This supports the notion that people with BDD have high aesthetic ideals that they do not believe they are attaining.

Similarly, using an experimental design, Buhlmann, Etcoff, and Wilhelm (2008) found that people with BDD rated attractive people as more attractive than clinical and non-clinical controls and rated themselves as less attractive than independent raters. The participants with BDD did rate themselves within the average attractiveness range which suggests that they do not believe they are unattractive per-se. Four of the 19 BDD sample in this group refused to have their photo taken which may have affected the results. Anson et al. (2012) found that people with BDD rated their own attractiveness lower than controls on a novel questionnaire designed for this study and also rated themselves lower than they perceived ratings by others.

A questionnaire-based study in a non-clinical sample found that basing one's self-worth on appearance is associated with symptoms of BDD but not obsessive-compulsive disorder or social anxiety (Phillips, Moulding, Kyrios, Nedeljkovic, & Mancuso, 2011). This suggests people with BDD may value the approval of others, but value appearance more highly and it is this that forms part of their high aesthetic ideals. This supports the self-discrepancy literature presented above but needs to be replicated in a clinical sample.

In summary, people with BDD may perceive they are not reaching their ideal aesthetic standards and rate their own attractiveness as lower than others. There is evidence that basing one's self-worth on appearance is related to BDD symptoms although these findings need to be replicated. There is limited evidence that people with BDD actively compare themselves with their ideals.

Perceptual and attentional factors

Selective attention

Individuals with BDD are more likely to focus on specific features and internal feelings rather than the whole body when engaging in a long mirror-gazing sessions (Veale & Riley, 2001). Both individuals with and without BDD experience an increase in self-focused attention after being exposed to a mirror (Windheim et al., 2011) although individuals with BDD experience this to a greater extent. Neither group in this study increased selective attention to the face when exposed to a mirror. Grochowski et al. (2012), however, found individuals with BDD show heightened selective attention to their facial area of concern and the corresponding area in the faces of others. They did not find that people with BDD spent longer looking at these areas than controls although reported large variability and proposed that there may be subgroups of BDD who either look at their flaws little and often or less often and for longer.

These findings are mainly corroborated by Greenberg et al. (2014) who found that people with BDD displayed a selective attention bias toward their most unattractive feature. However, as participants' age increased their focus shifted from the most unattractive to most attractive feature on their own face and from the most attractive to least attractive feature in another person's face. Non-clinical controls displayed the opposite trend. Females with BDD selectively attended to their most unattractive feature whereas males with BDD selectively attended toward their most attractive feature. Non-clinical controls again displayed the opposite trend. People with BDD attended more toward their least attractive features relative to their most attractive feature and also attended more to the

corresponding feature of control face. There was no link between attentional bias and clinical severity in this sample. Both studies used similar samples, although Grochowski also used a social phobia control group.

A non-clinical study of female Australian undergraduates used a dot probe paradigm to demonstrate that, when presented for a long duration (1000ms, therefore within conscious awareness) people with high dysmorphic concerns display attentional biases toward faces and attractive, and possibly unattractive, appearance-related images (Onden-Lim, Wu, & Grisham, 2012). This effect was not present for the short duration (200ms, therefore outside of conscious awareness). However, this study only found weak correlations between these measures (maximum $r=.26$). They also found a weak relationship between dysmorphic concern and automatic selective attention toward disgusting images. Buhlmann, McNally, Wilhelm, and Florin (2002) used a Stroop procedure with an inpatient sample of people with BDD, all receiving CBT, and found evidence of selective attention to both positive and threatening words regardless of disorder-relevance. There was a greatest interference for positive BDD-related words such as 'beauty' and 'gorgeous' suggesting these may be the most salient stimuli for this group.

In summary, a variety of methodologies and samples were used to investigate this maintaining factor and they present a range of conclusions. There is conflicting evidence as to whether people without BDD selectively attend to internal experiences after mirror gazing but two of the studies using eye tracking data report largely similar findings. There is no clear theoretical reason why there would be an age and gender effect in relation to selective attention and this merits further investigation. It seems likely that people with BDD do selectively attend to certain stimuli however it is not clear the extent to which this maintains symptoms as this generally has not been investigated. There is suggestion that severity of illness is not correlated with selective attention.

Over-focus on detail

There is evidence that people with BDD (Feusner et al., 2010) or BDD symptoms (Mundy & Sadusky, 2014) process details rather than whole images. This may only be the case when images are presented long enough to be within conscious awareness, however, (Feusner et al., 2010) suggesting some element of conscious decision-making may be in use.

A further study using an experimental design and larger sample, used three different processing tasks to evaluate holistic encoding and found no differences between people with and without BDD on any of the tasks (Monzani, Krebs, Anson, Veale, & Mataix-Cols, 2013). There was no correlation between illness severity and performance. Although using similar paradigms the studies used different methodologies and, crucially, different presentation times of stimuli (Monzani and colleagues used 250ms, Mundy and Sadusky used 650ms). Taken together, it may be that when stimuli are presented quickly there is no effect but when presented for a longer duration there is a processing bias. It also may be that Monzani and colleagues' presentation time was too short to detect any effect. This time-dependent consideration is consistent with the findings by Onden-Lim et al. (2012), presented above.

In summary, there is mixed evidence as to whether people with BDD over-focus on details. However if they do then it is likely to be a conscious rather than unconscious process although there is no suggestion that this is intentional. The studies investigating this process have all focus on perceptual methods and the field may benefit from behavioural studies.

Processing oneself as an aesthetic object

The Veale model proposes that when 'processing oneself as an aesthetic object' people with BDD focus attention on a distorted image. Only one paper has investigated imagery in BDD and found that, compared to controls the imagery people with BDD experience was more vivid, bright and detailed, viewed from an observer perspective and with a negative emotional tone (Osman, Cooper, Hackmann, & Veale, 2004). It was also more likely to be associated with a specific memory. The researchers did not focus on the extent to which the image may have been 'distorted'.

A further study from the same research group investigated 'metacognition' in relation to images within a sample of people with severe BDD and found that they tended to have negative thoughts about the image (Cooper & Osman, 2007). This study was a preliminary investigation and did not use a control group or validated tools. This study provides insight into what people with BDD may do when confronted with uncomfortable images. Once focused on a distorted image, it is hypothesised that people with BDD use their attuned aesthetic sensitivity to apply high aesthetic standards and compare themselves with their ideals.

There is evidence that people with BDD are more aesthetically sensitive than people without BDD (Lambrou, Veale, & Wilson, 2011) although it is not clear what relationship this sensitivity has with BDD itself. For example, being more aesthetically capable may make people susceptible to BDD or it could arise due to the condition. No longitudinal data is available to inform this. In contrast, there is evidence that people with BDD do not show a preference for symmetrical faces (Reese, McNally, & Wilhelm, 2010). This study only presented unfamiliar faces, which may have a different effect from participants' own faces and it used unmatched samples in terms of gender.

There is evidence that people with BDD do not differ from controls in their ability to detect changes in symmetry, colour and size of other peoples' faces and objects (Buhlmann, Rupf, Gleiss, Zschenderlein, & Kathmann, 2014; Reese et al., 2010). There has been suggestion, however, that females with BDD are more able to detect changes to unfamiliar faces than people with dermatological conditions and controls (Stangier, Adam-Schwebe, Muller, & Wolter, 2008) which is consistent with Reese et al. (2010).

In an experimental study, researchers presented digitally manipulated images of faces and objects and asked participants with dermatological conditions, BDD and neither condition to report whether the image was identical to the previously presented image (Buhlmann et al., 2014). Findings suggest that people with BDD were more likely to perceive changes when none had been made. This has obvious clinical relevance to people with BDD. Yaryura-Tobias et al. (2002) similarly found that around half of their sample of people with BDD or OCD manipulated images of their own face, an unfamiliar face and a round object thinking that they had been distorted by researchers when no distortions had been made. No non-clinical controls made any alterations, although the sample in this study was small and did not report how they confirmed BDD diagnosis.

In summary, it is difficult to conclude whether processing oneself as an aesthetic object maintains BDD. Research has investigated aesthetic sensitivity in BDD although it is not clear the extent to which people may use this increased sensitivity to process themselves as an aesthetic object. It is also not clear whether increased sensitivity is implicated in the development of BDD or whether it occurs as a result of it. There is good evidence that people with BDD are likely to perceive changes where none have been made.

Misinterpretation of visual information

Evidence presented previously (Buhlmann et al., 2014; Lambrou et al., 2011; Reese et al., 2010; Yaryura-Tobias et al., 2002) all apply to this area and are outlined above. An earlier

study concluded that people with BDD have a less distorted image of themselves than control and surgical patients (Thomas & Goldberg, 1995). However, from their data the effect is likely to be small and may be a result of increased mirror exposure. Their BDD group also did not usually have BDD as their primary diagnosis. A more recent study used morphing technology to morph participants' faces with attractive or unattractive faces in varying degrees (Clerkin & Teachman, 2008) and found that people with high BDD symptoms did not show a self-enhancement bias. Participants high in BDD symptoms did not select a more attractive morph of their face when asked to select their actual face whereas participants low in BDD symptoms did. Participants were able to use a mirror as reference before selecting their response and it would be interesting if the results were replicated using peoples' mental representation of themselves.

In summary, it seems that in some respects people with BDD interpret visual information more accurately than other people to the extent that they lose the self-serving bias that people without BDD display. However, the evidence for this is from an early study that had methodological and sampling issues and another study using a non-clinical sample.

Discussion

The aim of this review was to critically review the maintenance factors proposed by two major CBT formulation models of body dysmorphic disorder (Veale, 2004a; Wilhelm et al., 2013). Overall findings were mixed, with some factors receiving much attention and some few. All factors have been investigated at least once.

Behavioural maintenance factors received the most research attention and it is clear that people with BDD engage in a variety of safety-seeking behaviours. The Veale model explicitly states "suffice to say that all safety behaviours are a major maintenance factor in the preoccupation and distress of BDD" (Veale, 2004a, p. 121) and there is support for this statement, although avoidance and behaviours around mirrors have the most support. These are often targets for treatment, which may be why they are the most frequently researched. Much of the behavioural research has focused on behaviour around mirrors and have not investigated other ritualistic behaviours that people with BDD often engage in such as checking, adjusting and grooming as well as mental rituals. The studies investigating behavioural maintenance factors have also predominantly used self-report data with the exception of some behavioural tasks and the field would benefit from the use of more naturalistic measures of behaviour in the future. There has been little investigation into the maintaining nature of rumination, despite its high prevalence.

Theoretically safety-seeking behaviours maintain symptoms by preventing disconfirmation of beliefs (Salkovskis, Clark, Hackmann, Wells, & Gelder, 1999) and future experimental research investigating the effects of continuing or dropping a safety-seeking behaviour on symptoms would be useful in this field. There is good evidence to conclude that people with BDD perform safety-seeking behaviours which are likely to maintain their symptoms.

Overall the cognitive maintaining factors have not been investigated widely. There is support for the proposal that people with BDD value their appearance and explicitly endorse attractiveness as being important however it is not clear the extent to which these factors maintain symptoms. Imagery is frequently quoted as being central to the BDD maintenance model yet there is only one research paper which investigates imagery directly (Osman et al., 2004). This reported that people with BDD tended to use the observer perspective, which has been found in people with high social phobia symptoms to be related to frequent negative thoughts, more safety-seeking behaviours and worse self-evaluation of themselves when asked to give a speech (Spurr & Stopa, 2003). It would be an interesting continuation for future research to see whether this effect is replicated in people with BDD. There is evidence that people, when asked, can often recall the same memory in both the observer and field perspective (Rice & Rubin, 2009). Future research may wish to investigate whether encouraging description of an image through a different perspective might lead to a decrease in symptom severity.

The perceptual and attention maintenance factors received mixed and sometimes conflicting support in the literature. A meta-analysis of threat-related attentional biases across individuals with and without anxiety found a small-medium effect size ($d=.45$) across studies (Bar-Haim, Lamy, Pergamin, Bakermans-Kranenburg, & van Ijzendoorn, 2007). This was independent of study methodology, so it is unlikely that in BDD a Stroop paradigm is more useful than a dot-probe paradigm, for example, which means that until further work is done to resolve the conflicting evidence there are limited conclusions to be made. A consistent finding is that when people attend to their own face (i.e. in a mirror or reflective surface) they attend to their perceived most unattractive feature. The strength of the evidence then suggests it is then likely they apply their high aesthetic standards and are more likely to perceive differences that are not really there.

General methodological considerations

In addition to those above, it is important to note that the samples in many studies used an imbalanced gender ratio. There is evidence from demographic studies that, although possibly partially weighted toward females, the gender balance in BDD is roughly equal

(Koran, Abujaoude, Large, & Serpe, 2008; Phillips & Diaz, 1997). Some studies used samples up to 95% female (Buhlmann, Teachman, et al., 2008) and although it is frequently cited as a limitation it makes generalisation to the BDD population difficult. Studies frequently used their own novel questionnaires which makes interpretation and conclusions difficult. This was particularly frequent from the Veale research group.

It is difficult to conclude whether the research presented provides evidence that the proposed maintenance factors actually maintain symptoms and are not a cause or consequence of symptoms. To support the maintaining nature of the factors, future research would benefit from experimental manipulation of the factors to measure their effect on symptoms (i.e. 'component studies') and future research may want to particularly focus on the effects of experimental suppression of proposed cognitive and attention and perceptual maintenance factors. As yet all studies either use experimental or cross-sectional questionnaire design whereas in the eating disorder literature there is an emphasis on longitudinal experimental methods which seek to establish if an increase or decrease in these potential maintenance factors affect symptoms (e.g. Bohon et al. (2009)). To date this has not been pursued in the BDD field and no longitudinal papers have investigated maintenance factors so it is difficult to tell which factors truly maintain the disorder.

There is little consideration of how cultural and societal factors maintain symptoms of BDD in either model. It is understood that BDD exists across cultures (Phillips, 2004) but no studies have investigated the effect of cultural and societal influences on the maintenance of BDD symptoms. Such influences could include the effect of the media, beliefs about beauty and ugliness or specific cultural beliefs and practices. Future research could strengthen the models by including these factors.

Most studies in the review used a validated measure of BDD symptoms (BDD-YBOCS; Phillips, Hollander, Rasmussen, & Aronowitz, 1997) although the mean severity in the samples ranged from 20-34. Although not a diagnostic measure it recommends a clinical cut-off as 20 meaning that studies ranged from samples only just meeting criteria to the severe range.

Strengths and limitations of the review

This review used structured, replicable methods of data collection and was rigorous in its selection process. It has a strength in being strict to the formulation model however this did mean that some papers were not able to be included despite possibly being relevant

for maintaining symptoms. The structured approach of the review meant it was sometimes difficult to categorise papers into specific maintenance factors and papers frequently investigated several factors simultaneously, which makes for repetition and a potential lack of clarity.

Clinical implications

This review highlights that both models have received support from research. There is evidence that people with BDD experience complex emotions around mirror gazing, experience urges to both continue and discontinue gazing. Generally they use mirrors in the same way to people without BDD but attribute more meaning to their reflection, draw more conclusions, experience more distress, selectively attend to internal experiences and end gazing sessions based on these inner experiences rather than external reasons. Training to focus on external factors may help with these, although this is not grounded in research evidence.

People with BDD frequently report negative body-related cognitions, believe they aren't reaching aesthetic standards and their rate attractiveness as lower than others. They may over-focus on detail when it is within conscious awareness. This suggests that it is not a purely perceptual phenomenon and may be amenable to retraining or another intervention. They are also more likely to perceive changes where none exist. This may be due to a difference in ability or could possibly be attentional. It is possible that using descriptive rather than evaluative language could be useful. Although research is limited, people with BDD may experience images differently to people without BDD and therefore it may be useful to ask people about their subjective experience of images. There is recent evidence that imagery re-scripting can reduce symptoms of BDD (Willson, Veale, & Freeston, 2016).

Overall conclusions

The research in this area is limited by the lack of longitudinal studies that investigate whether the proposed maintenance factors actually maintain symptoms. Thus far research has focused on the presence or absence of these maintaining factors and there has been differing support for them. Overall the strength of the evidence favours the Wilhelm model due to its support from more experimental research studies with clear findings. However, the model still has a lack of evidence for its over-focus on detail and exaggerated meanings of imperfections factors. The Veale model receives good support

for its behavioural factors however it has less support for its cognitive, attention and perceptual factors.

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Service Improvement Project

A Thematic Analysis of Emotional and Psychological Experiences of People with Heart Failure.

Gerwyn Mahoney-Davies, Clinical Psychologist in Training,

Department of Clinical Psychology, University of Bath, Claverton Down, Bath, BA2 7AY.

Email: G.Mahoney-Davies@bath.ac.uk. Tel: 01225 385506.

Supervisors: Dr Cara Davis and Prof Paul Salkovskis

Department of Clinical Psychology, University of Bath, Claverton Down, Bath, BA2 7AY.

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Abstract

Aims and objectives: To understand the emotional and psychological experiences of heart failure patients in a busy NHS service.

Background: People with heart failure often experience depression, anxiety and other emotional and psychological difficulties. Their quality of life is reduced. Qualitative studies attempting to understand this have reported conflicting findings.

Design: A mixed methods approach was taken.

Methods: Ten participants were asked to complete the PHQ-9 and GAD-7, rate their level of concern about their mood, anxiety, quality of life and social functioning. They completed a semi-structured interview about their experience of living with heart failure and the emotional and psychological impact of this. The interview was analysed thematically.

Results: Participants scored in the moderate range on both depression and anxiety measures. They were more concerned about their mood, anxiety, quality of life and social functioning at present compared to before the onset of heart failure. Themes present in the interview data were changes to self and others; emotional reactions; thoughts about death; expectations for the future and hospital experiences.

Conclusions: People with heart failure report moderate levels of depression and anxiety, significant changes in their lives and display varying emotional reactions to these. People have clear expectations for the future and impose limits on their life.

Relevance to clinical practice: This study contributes depth to the understanding of the psychological and emotional experience of heart failure patients in busy services. Inadvertently it also describes a relatively young sample of heart failure patients.

Introduction

Heart failure is characterised by insufficient circulation from the heart, breathlessness, fatigue and water retention. People with heart failure also commonly experience psychological and emotional distress (Bennett, Pressler, Hays, Firestine, & Huster, 1997; MacMahon & Lip, 2002). Several reviews indicate that people with heart failure report feelings of depression and anxiety (Rutledge, Reis, Linke, Greenberg, & Mills, 2006; Sokoreli, Vries, Pauws, & Steyerberg, 2015), unsurprisingly given its chronic nature and effect on quality of life.

The distress experienced by people with heart failure has previously been understood in terms of the Common Sense Model of illness (Leventhal, Meyer, & Nerenz, 1980) which proposes that beliefs about the cause and consequences of illness mediate how one behaves and experiences the illness. However, studies investigating how this applies in heart failure have varied in their support for the model and it is possible that cultural differences between studies make comparison difficult.

Similarly, little is known about how patients experience receiving care from heart failure services. This study, therefore, investigates how patients understand their illness and how they experience receiving care from a busy local NHS heart failure service.

Background

Heart failure is a complex syndrome which does not have a single cause but is associated with other pre-existing heart conditions such as coronary artery disease, high blood pressure and previous heart attack (Remme & Swedberg, 2001). Around 900,000 people in the UK have a diagnosis of heart failure (Petersen, Rayner, & Wolstenholme, 2002) and the average age at diagnosis is 76 (Cowie et al., 1999). Mortality in this population is high, with 30-40% of patients dying within the first year and a rate of around 10% each year thereafter (McMurray et al., 2008).

How does heart failure affect people?

People living with heart failure experience psychological distress, reduced social functioning and diminished quality of life (Bennett et al., 1997; MacMahon & Lip, 2002), high mortality rates (Cleland, McDonagh, & Mitchell, 2013), reduced life expectancy (Stewart, MacIntyre, Hole, Capewell, & McMurray, 2001) and decreased social contact (Murberg & Bru, 2001).

Depression

People with heart failure report moderate levels of depression, comparable to other long term health conditions (MacMahon & Lip, 2002). Clinically significant depression is reported by around 21% of the heart failure population when data is pooled, although individual studies ranged from 9%-60% (Rutledge et al., 2006). The authors indicate that this is around 2-3 times the level reported in the general population and slightly higher than that reported by people with coronary artery disease. These figures are from comparable studies so it is not clear whether they are significant. Further work has explored the role that depression has on quality of life in people with heart failure and found that even when controlling for other factors, people with higher levels of depression have more negative quality of life (Leftheriotis, Stefanadis, Tousoulis, Pitsavos, & Kyritsi, 2015).

Anxiety

The prevalence and significance of anxiety in heart failure is less clear than depression and has received less research attention. The prevalence of a diagnosable anxiety disorder may be around 40% in the heart failure population, which is significantly higher than unaffected people in the same age range (Moser et al., 2010). A recent review of six studies found that anxiety may be associated with increased admission rates to hospital, although the low number of studies included does not allow firm conclusions to be made (Vongmany, Hickman, Lewis, Newton, & Phillips, 2016).

How can we understand these issues?

These psychological and emotional difficulties could be understood using the Common-Sense Model (CSM) of illness (Leventhal et al., 1980). The model proposes that an individual constructs a cognitive representation of the illness through a number of factors: illness identity, cause, consequences, timeline. This illness representation is thought to be important in how the individual subsequently behaves in relation to their condition.

A seminal paper by Horowitz, Rein, and Leventhal (2004) in the USA found that their sample of nineteen patients with heart failure perceived heart failure as an acute disease and therefore did not manage their illness in the manner that a chronic condition is usually managed. They also found that patients had inadequate information about their illness, did not have tools to manage their illness and found barriers in place to receiving care such as lack of knowledge of heart failure cause and symptoms and fears about attending hospital. This study may not be representative of heart failure patients currently in the UK, however, due to cultural differences as well as differing healthcare systems. More recently MacInnes (2014) investigated the experiences of heart failure patients in South-East England using thematic analysis based on the CSM and found that, in contrast to the findings by Horowitz et al. (2004), people believed that heart failure was a chronic illness with serious consequences. Patients found it difficult to differentiate between symptoms of heart failure, effects of medication and emotional responses to the illness. There was a tendency for people to misattribute heart failure to external factors such as life stresses and family history rather than lifestyle factors. This may affect the patient's ability and motivation to adhere to lifestyle change recommendations such as ceasing smoking and increasing physical activity.

Welstand, Carson, and Rutherford (2009) reviewed qualitative investigations into the experience of people with heart failure and found five themes that were common to all papers: diagnosis and manifestations of heart failure, perceptions of day-to-day life, coping behaviours, role of others and self-concept. They propose that these concepts have significant overlap and are mediated by the concept of 'self'. They go on to propose that people with heart failure undergo a process of taking on a new identity, a "new self" (p.1380), and need to make sense of this despite "not having a pre-existing script" (p.1383).

Less attention has been paid to heart failure patients' experience of the support they receive from busy NHS service. This is important because it is clear this group of people

may have difficulties with depression and anxiety and have experienced a major life event. Information about how they perceive their illness and the care they receive could give clinical staff better insight into how to provide the most appropriate care.

This study aims to evaluate the experiences and needs of heart patients at a busy acute hospital, the Royal United Hospital, Bath (RUH). The service became aware that many of their patients appeared to be experiencing psychological and emotional difficulties but were not eligible for psychological support that is provided to people with other coronary conditions. The service therefore requested support understanding the needs of this patient group and ways they could provide support in everyday practice.

Method

Participants

Ten participants took part in this study. Three others were invited but did not take part. Two did not give a reason but one was embarrassed about hearing difficulties. Participants' age ranged from 47-75 with an average of 63.4. Demographic details of participants can be found in table 1. Eight participants were of White British ethnicity, one was Eastern European and one was Indian.

Design

A mixed methods approach was taken. Reported levels of depression and anxiety were analysed quantitatively to allow comparison with the wider heart failure population. Participants completed a semi-structured interview which asked about their experience of receiving care from the RUH and their understanding of heart failure. This was analysed qualitatively.

The study was approved by the University of Bath Psychology Ethics Committee and the Royal United Hospital NHS Foundation Trust Research and Development department. Full NHS ethics was not required as this study was a service evaluation. Participants gave informed consent to take part in the study and were assured that their data was confidential and would be reported anonymously.

Sampling

A targeted recruitment approach was used to identify people who would be able to describe a breadth of experiences. Two groups were recruited; people who were perceived to have adjusted well to their condition and people who had not adjusted well. These groups were chosen to provide contrasting experiences. The criteria for the groups

were defined by the service and can be found in appendix C. When a participant met either of the criteria they were given information about the project by their nurse. If they agreed to participate their contact details was passed on to the first author who gave them full information about the study and booked an appointment to see them at their home.

Materials

All participants completed a semi-structured interview and two questionnaires:

- The semi-structured interview (for a copy see appendix D) consisted of seven open questions about their experience of receiving a diagnosis, how they coped with this and the support they received, their expectations about living with heart failure, their predictions for the future and how heart failure has affected them emotionally. They were also asked to rate their mood, anxiety, quality of life and social functioning (on a 10 point scale) in relation to their experience prior to heart failure, at the worst point since heart failure and at present.
- Patient Health Questionnaire (PHQ-9) (Kroenke, Spitzer, & Williams, 2001) – a widely used 9 item measure of depression symptoms validated in this population (Hammash et al., 2013). Scores range from 0 to 27 with higher scores indicating more severe depression.
- Generalised Anxiety Disorder (GAD-7) (Spitzer, Kroenke, Williams, & Löwe, 2006) – a widely used 7 item measure of anxiety symptoms. Scores range from 0 to 21, with higher scores indicating more severe anxiety.

A targeted recruitment approach was used to identify people who had not adjusted well to living with heart failure and therefore could potentially require the most emotional and psychological support. A group of people who were perceived to have adjusted well were also approached. Potential participants were given information about the project by their nurse and, if they agreed, their contact details was passed on to the first author who gave them full information about the study and booked an appointment to see them at their home.

All interviews were conducted by the first author and took between 30 and 60 minutes. The interviewer was blind to which group the participant belonged to. The interview was audio recorded and later transcribed by a psychology undergraduate student at the University of Bath.

Epistemology

The author brings a critical realist view - that there is an objective reality, but one's understanding of this reality is a construction of their experience and perspectives. The data were analysed using inductive methods of thematic analysis to allow production of themes which fit the data without a pre-imposed structure. In this regard, data were analysed at the semantic level so that interpretation of themes can be made.

Analyses

The total PHQ-9 and GAD-7 scores were calculated for both individuals and the overall group. Participants' responses to the scaled questions outlined above were collated. Qualitative data were analysed using the Braun and Clarke method of thematic analysis (Braun & Clarke, 2006). Each interview transcript was read a minimum of three times or until the first author felt familiar with the content. During this period notes were written about possible themes. The author then re-read the transcripts and coded data for the well-adjusted group.

Codes were then grouped together into preliminary themes and discussed within the research team. At this point it was suspected that the data were not different between the well-adjusted and not well-adjusted groups. The remaining datasets were coded and preliminary themes reflected those of the well-adjusted group, suggesting data saturation. The data was thereafter combined to make a single group. These preliminary themes were refined and checked against the transcripts. They were further refined until they were both representative of the datasets.

Alongside this, the transcriber also coded the data and developed themes. They discussed their codes and themes with the first author. There was agreement on all themes.

The data collected were heterogeneous and therefore broad themes were required to be representative of the groups.

Results

Quantitative

On average participants scored in the 'moderate' range on measures of depression (mean 10.6, SD 6.2) and anxiety (mean 8.8, SD 7.9) which is comparable to the general population of people with heart failure.

Table 1: Demographic data and responses to questionnaires.

Participant number	Gender	Age	PHQ-9	GAD-7	NYHA	Number of Admissions
1	M	68	2	1	2	2
2	F	74	19	7	3	>10
3	M	72	15	21	3	1
4	F	51	4	4	2	1
5	M	66	5	0	3	2
6	F	74	20	16	3	3
7	F	47	13	21	2	4
8	M	56	8	9	2	1
9	M	75	12	3	2	>10
10	M	51	8	6	2	3

*New York Heart Association Functional Classification – larger number represents more severity.

Cut offs: PHQ-9 - 5 (mild), 10 (moderate), 15 (moderately severe), 20 (severe); GAD-7 - 5 (mild), 10 (moderate), 15 (severe)

Participants rated themselves as having more concerns about their mood, anxiety, quality of life and social functioning at present compared to before onset of heart failure. See table 2 for details. No statistical analyses were conducted on these data.

The worst point over the course of the illness was variable between participants. Most commonly this was around periods in hospital although there were no specific times which were common to participants. Instances around hospital included immediately prior to first hospitalisation, around the time of diagnosis and a number of weeks after diagnosis.

Table 2: Scores on quantitative interview questions. Participants rated their concern in these areas out of ten.

Participant number	Mood			Anxiety			Quality of Life			Social Functioning		
	<i>Pre</i>	<i>Worst</i>	<i>Now</i>	<i>Pre</i>	<i>Worst</i>	<i>Now</i>	<i>Pre</i>	<i>Worst</i>	<i>Now</i>	<i>Pre</i>	<i>Worst</i>	<i>Now</i>
1	0	5	2	0	3	0	0	2	0	5	0	0
2	0	9	8	0	9	5	0	10	9	0	9	6
3	0	3	10	2	3	9	0	3	9	0	0	9
4	0	8	3	3	7	6	0	5	2	3	2	3
5	0	0	2	0	5	0	0	0	8	0	9	8
6	4	10	8	6	10	8	8	9	8	6	8	8
7	1	5	5	1	5	10	0	9	8	0	9	9
8	0	9	2	8	9	3	3	5	2	8	9	2
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	10	0	0	5	0	0	0	0	0	0	0
Avg.	0.5	5.9	4.0	2.0	5.6	4.1	1.1	4.3	4.6	2.2	4.6	4.5

Qualitative

The analysis resulted in five super-ordinate themes: *changes to self and others; emotional reactions; thoughts about death; expectations for the future and hospital experiences.*

These super-ordinate themes and their related sub-ordinate themes will be explored further below with supporting quotations.

Changes to self and others

Participants discussed how their lives had changed physically, emotionally and relationally, and how these changes affected themselves and others. These changes were both positive and negative. Most frequently people described how heart failure had impacted on their sleep and levels of fatigue. People frequently discussed having to make changes to their sleep routine and set-up with many people finding more comfort sleeping upright in armchairs or in uncommon positions.

“I was sleeping sitting down and moving, finding the place where it wouldn’t hurt, and stay like that as I sleep for maybe an hour” P3

Rather than this physical discomfort, however, one participant discussed his worries about not waking up if he fell asleep.

“I just didn’t want to go to sleep. I was absolutely knackered and I would just sort of nod off and wake up... It was anxiety about not waking up and just thinking I was going to die”

P8

This physical discomfort and fatigue affected participants’ ability to carry out both everyday tasks which were important to their role and sense of self and to pleasurable leisure activities. Participants describe a sense of loss of things they previously enjoyed or valued.

“And you know I can’t do this, I can’t iron now, can’t clean, I can’t do anything” P7

“I loved hiking. I could do 20 miles a day, no problem, pot-holing, mountain climbing, I loved it all. I can barely climb a fricking curb now.” P10

For participant 7 (above) cleaning and ironing were related to her sense of self in terms of her position in her family and culture. To her they signified her role as a mother and wife.

Participants also discussed changes to their social activities. The physical symptoms of heart failure often meant that people declined social events due to expectations of exerting physical energy. This meant that they missed out on potentially enjoyable opportunities to increase their pleasure and self-esteem.

“My friends have invited me over to France a couple of times and I’ve said that I couldn’t manage it, getting in a car, driving over and driving back again and I’ve said I just can’t do it” P9

Heart failure limited participants’ ability to work, placing financial pressure on families and affecting their independence. Although most participants discussed negative changes in their life, occasionally people talked about positive changes and how heart failure has allowed them to live a slower pace of life with more enjoyable activities.

“I’ve had a good life since [the onset of heart failure]. I’ve been able to do lots of stuff, holidays and this sort of thing. I’m into classic cars and I’ve [been] buying classic cars and driving them around and what have you.” (P1)

Although heart failure is a condition of the individual, it was described as having a significant effect on family and friends. This is possibly related to a change of role or acknowledgment that heart failure may affect the future of the family unit.

"It's interesting because... you know, what happened to me happened to me but it affected my family" P8

"A lot of the time I can't say [about the future] because my husband, I think he battles, I think he battles with it a lot more than I do probably" P6

Acceptance and Avoidance

Participants spoke about coping with these changes in a number of ways generally falling into themes of acceptance or avoidance. Participants frequently used the term 'acceptance' and many gave examples which demonstrated acceptance of their condition, including making the most of life, making positive changes, engaging in appropriate physical activity, internal locus of control and knowing one's limits.

"It's about acceptance isn't it? And dealing with stuff and you can't do everything immediately you just can't. I wouldn't have been able to process stuff and deal with it... you think about all these things but you can't run before you can walk." P8

"The slower you get up to a certain level your fitness will improve up to a certain level but then you get to a certain level and that's it as far as it will go. And all you've got to do to help yourself is make sure you go down to your class to maintain that level you've reached." P1

Some participants did not cope with changes in their life this way. Some people withdrew from their life, compared themselves in unhelpful ways with others, turned to alcohol or smoking, had an external locus of control or used humour or other means to avoid thinking about their difficulties.

"I just stick it to the back of my head and think 'well, don't think about it'" P6

"I start to smoke again, I start drinking again." P3

"There's a man a couple of doors down had a heart attack after me. He's fine, fit as a fiddle. He's running around, he's had his implant put in [but I haven't]" P10

Emotional reactions

Participants described a range of emotional reactions. Most participants described feelings of shock around the time of diagnosis, anger, sadness and fear or worry. Many participants reported emotions changing over the course of their illness, typically from shock at diagnosis to anger at the NHS system and worry about the future and other people.

Diagnosis was typically a difficult time for people, although some reported not reacting particularly strongly as they were unaware what was happening or what heart failure was. Of those who did report an emotional reaction to the diagnosis it was typically one of shock or disbelief.

“When someone says you’ve got a heart problem it obviously shocks you” P4

“I didn’t realise how serious it was...it took me a long time to take in the fact that it was my heart” P5

Many participants reported feelings of sadness. This may have been about their life circumstances or limitations, thoughts about the future or feeling like a burden.

“I’m very sad. I’m very sad.” (P7)

Feelings of anger, if present, were usually directed at the hospital system. Frustration was also commonly reported but this was usually in relation to the limitations that were placed on everyday life.

*“As I said, with the doctors and everyone saying, even the consultant saying “it’s urgent, you need to do it, it’s urgent”, why is it taking so f*cking long then?” P10*

Most commonly, participants talked about worry. This was almost exclusively focused around thoughts of their own mortality and the effect of this on their family. This was one of the few themes which was common to every participant and is obviously related to the other theme of ‘thoughts about death’.

"I just hope... if anything... like you say, I just worry about [family]. Are they going to talk to each other? Are they going to open up to each other? Or are they going to sit in their rooms and totally ignore each other all the time?" P6

*"[I'm worried] that it's gonna f*cking pack in! That's a big worry! Yes I have worries about it!" P10*

For some participants this worry was accompanied by fear, which was typically a more present-focused emotion specific to a situation. For some participants this was fear around a procedure or of imminent health concerns.

"Whoever you are dealing with I mean they do give you [reassurance] because they know that you're afraid and you're frightened" P4

Thoughts about death

This was another theme common to all participants. All participants were aware of their mortality and this was frequently at the forefront of their minds on a daily basis. It possibly underpins some of the positive changes that people have made in their life such as having more open conversations with their friends and family and making changes to their working schedule to allow time for exercise. It also, however, is likely to have been responsible for negative changes such as avoiding pleasurable activities so as not to risk deteriorating their condition. Some people talked about death candidly but some seemed to find it difficult to confront.

"Whenever there's a baby on the way I say 'I don't expect I'll see it' and [my family] all say 'oh don't be daft'. You don't think you are going to live to see another Christmas" P2

"Thinking you are going to die. From today to tomorrow [that is all I am] thinking." P3

"I suppose it brings you up to the frailty of life, you know, and at the end of the day it's a bit of a shock, you know, your life is potentially, is coming to a... you know... we are only here for a given period of time aren't we?" P8

Expectations for the future

Most participants discussed their expectations about what the future will bring as this was somewhat prompted by the question "what do you expect living with heart failure to be

like?” The response to this was variable. Some people had a hopeful, but not unrealistic, expectations.

“With my magic box of tricks [pacemaker] fitted I can look forward to a decent future again.” P1

“You know, there are a lot of people out there wandering around not knowing [they have heart issues] so I’ve been through that and got the opportunity for moving on” P8

Some people found the future very difficult to think about. There was a sense of “stuckness” at times. Sometimes the responses people gave may be realistic but the way they were expressed captures a tone of hopelessness.

“There’s nothing more they can do. I mean if [I got worse] and I ended up with fluid I don’t think they would do anything.” P2

“I thought ‘my life is gone’, you know?” P7

Alongside these responses were participants who were uncertain about the future. This was typically characterised by rhetorical questions like “*what’s going to happen...? Can they do anything...?*” (P4).

Hospital experience

Predominantly participants described the staff they came into contact with as laudable, but the system they worked within could cause upset. In this regard participants talked about the staff as good and the system as bad. It was often the small acts of kindness or care from staff that made the most difference. This could be something as small as providing information at a time when the person was able to receive it, having a conversation about something other than heart failure or just spending time with patients.

“[the nurse] sat there and spoke to you and it seemed as if she had all the time in the world.” P1

“We had chats about football and that included the heart and all the rest of it and she gave you reassurance and everything” P4

“The bickering between [the two hospitals] is about finances and because I’m not from that authority it’s like ‘well, we’ll push that one aside’ and that’s really truly how it’s feeling even though I would not say a bad word about the healthcare team because they are all fantastic; it’s the bureaucrats pushing the pieces of paper around.” P10

Discussion

The aim of this study was to evaluate the psychological and emotional experience and needs of patients with heart failure. The participants in this study had comparable levels of depression and anxiety to those reported in the heart failure literature suggesting they were a representative group in this regard. On a measure designed for this study, participants reported heightened current concern about their mood, anxiety, quality of life and social functioning compared to before the onset of heart failure.

Participants described how their lives had changed since the onset of heart failure and how this had been accompanied by a range of emotional reactions and thoughts about the future. All participants had considered their mortality after receiving a diagnosis and some were accepting of their condition and these changes whereas some were avoidant. This all links with their illness identity, which is a fundamental aspect of the common-sense model of illness perception (Leventhal et al., 1980). Participants generally had good knowledge of consequences and timeline. They were rarely avoidant or unsure of the fact they had a heart issue and evidenced this by making changes in their lives, albeit positively or negatively. Participants sometimes experienced changes to their roles and ability to engage in enjoyable activities.

Contrary to Horowitz et al. (2004), participants did not regard their illness as acute. Instead, the current findings are in line with MacInnes (2014), who also reported a British sample. She found that participants were clear that their condition was chronic in nature suggesting that cultural healthcare differences in information-giving or heart failure management may lead to different perceptions of illness. It may also be that in 2004 practice and understanding of heart failure was different and if the study was replicated the findings change. Regarding a chronic illness as such is important in terms of illness management. A mismatch between someone’s perception of their illness duration and reality, will affect their behaviour, which means that lifestyle, medication management and other factors are also likely to be mismatched.

Participants discussed the cause of their illness less frequently. There were no inappropriate suggestions as to what caused their illness, although some people seemed to be trying to figure this out and seemed as if they were searching for answers. Participants were clear that the illness could not be cured although most were aware that it could be managed with appropriate medical intervention. Being aware of this but waiting to receive it was often a source of anger and frustration.

Participants did not report any times which were commonly difficult for them. This suggests that people could be experiencing their most distressing point in their illness at any time, so it is important for health care professionals to keep an open dialogue about how the person is currently feeling in order to capture this. A collection of people did report that the most difficult period was during hospitalisation, so particular focus could be given to the times they reported which included initial hospitalisation and diagnosis, but also a number of weeks on from this. This may be around the time that people are looking toward discharge and the changes in their lives to come. Participants also discussed the impact of heart failure on their relatives given the potential impact that a diagnosis may have on their own lives and emotional wellbeing. This is in keeping with findings that caring for someone with a heart failure can affect physical and psychological health (Pattenden, Roberts, & Lewin, 2007).

Participants clearly reported that clinical staff were supportive and caring. They often had strong views about the healthcare system and delays in receiving interventions. With that in mind it is possible to make recommendations which can be integrated into routine clinical practice and do not require further resources or time. By amending current practice to reflect the insight given by the participants the impact of having a diagnosis on patients and their families could be reduced. These include:

- Clinical staff are well placed to advise patients how their lives could be adapted so not to limit their lives unnecessarily. It may be that patients can adapt their level of intensity, spread an activity over a longer duration or split an activity into smaller, manageable chunks. This could happen during routine check-ups using motivational interviewing techniques and resources (see Rollnick, Miller, Butler, & Aloia, 2009 for a guide on using motivational interviewing in health care)
- Clinicians should be aware of the impact of the diagnosis on family members as well as the patient. Consider having ongoing open discussions with both parties about the condition and expectations for the future. The worst point in the illness is variable, so it is important that this is continued after diagnosis.

- The patients appreciate being given time and having non-heart failure conversation as well as being given relevant information. These moments of non-heart failure conversation were important in the development of a relationship and significantly improved the experience of the patient. Increasing these where possible would be beneficial.
- Patients inevitably think about death and many have the view that their life is over. They could be further supported to explore activities they are still able to engage in which could maintain their quality of life. Openly discussing thoughts and beliefs about death during consultations could help patients understand they are not alone in thinking about this and normalise a potentially distressing experience.

Patients may have difficulty remembering the advice and support given during their inpatient stay so written information may be particularly useful and they may benefit from information about the emotional impact of receiving a diagnosis of heart failure. There are several information booklets available online or the service may wish to produce a specific booklet for their needs.

Limitations

This study has several limitations. Qualitative analysis will not provide generalizable answers, rather a rich account of the experience of participants in this study. As such it is possible that the experiences reported are specific to the patients in the South-West of England, this heart failure service or even these participants. However, it seems plausible that the wider heart failure population also has similar issues around emotions, changes, expectations and experiences of the hospital system and these could be expected given the impact on life that is reported in heart failure.

The sample used in this study was younger than the wider heart failure population which may have impacted on the experience and needs reported. Few studies have investigated differences between older and younger people with heart failure. Wong et al. (2013) report differences between young, very young and older adults but most differences were found between the youngest (20s) and oldest (>65) groups.

Conclusions

This study aimed to describe the psychological and emotional needs in a heart failure population recruited from a busy NHS service in South-West England. Participants reported moderate levels of depression and anxiety. Themes present in the data include

changes to self and other, emotional reactions, thoughts about death, expectations for the future and hospital experiences. A number of small changes for clinical practice could be implemented to improve the experience and emotional wellbeing of patients.

Relevance to clinical practice

This study contributes depth to the understanding of the psychological and emotional experience of heart failure patients in busy services. Inadvertently it also describes a relatively young sample of heart failure patients. Increased knowledge and understanding of the experiences of patients allows healthcare professionals to offer extra support or adjust their service to better meet the needs of their patients.

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Main Research Project

**Socialisation to the Model in Adolescent Cognitive
Behavioural Therapy: Measurement and Relationship
with Clinical Outcomes.**

Gerwyn Mahoney-Davies, Clinical Psychologist in Training,

Department of Clinical Psychology, University of Bath, Claverton Down, Bath, BA2 7AY.

Email: G.Mahoney-Davies@bath.ac.uk. Tel: 01225 385506.

Supervisors: Dr Maria Loades and Dr Ailsa Russell,

Department of Clinical Psychology, University of Bath, Claverton Down, Bath, BA2 7AY.

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Intended Journal: Behavioural and Cognitive Psychotherapy – this journal is interested in processes within cognitive behavioural therapy and the key reference for this paper was published in this journal.

Abstract

Background:

Socialising a client to the cognitive behavioural model is advised in almost every cognitive behavioural therapy textbook but there is limited evidence for whether socialisation is measurable or important in terms of outcomes.

Aims:

To determine whether socialisation to the model could be measured in a sample of young people who have completed CBT and to explore whether this construct is important in relation to clinical outcomes.

Methods:

Sixteen participants (mean age 14.9 years, 75% female) completed a semi-structured socialisation interview and a novel written measure of socialisation. They rated their subjective improvement using the Clinical Global Impression improvement subscale. Treating clinicians were asked to provide participant routine outcome measure scores, subjective ratings of participant socialisation and their Clinical Global Impression improvement subscale score.

Results:

A moderate but non-significant correlation was found between the novel written measure of socialisation and clinician rating of socialisation ($r = .37$) and greater total socialisation was associated with greater percentage change on routine outcome measures ($r = .42$) although simple clinician rating of socialisation was also associated with percentage change ($r = .42$). None of these correlations were significant, however, probably due to the small sample size.

Conclusions:

A small sample size precludes conclusions being made but useful ways of improving research in this newly developing area were learned and discussed.

Introduction

Cognitive Behaviour Therapy (CBT) is a psychological intervention which seeks to reduce the distress associated with, and impact of, emotional disorders including anxiety and depression. There is evidence that CBT can be used successfully with children and young people with a range of diagnoses (Fuggle, Dunsmuir, & Curry, 2012; Stallard, 2002) and it is recommended by the National Institute for Health and Care Excellence (NICE) for a number of mental health difficulties. However, despite treatment advances since CBT was first developed, some elements of the model which were proposed in Beck's original publication (Beck, 1979), have remained uninvestigated.

In CBT, the aim is ultimately to help the client become their own therapist. From the outset of therapy the CBT client, in collaboration with the therapist, is helped to recognise the connection between thoughts, feelings and behaviour and gains an understanding of how this applies to their individual circumstances. This is the process of 'socialisation to the model' which a DELPHI study (Roos & Wearden, 2009) has defined as:

"...the process by which a service user and clinician negotiate a shared understanding of the presenting difficulty. During the process, the clinician presents hypotheses and a formulation of the service-user's symptoms and experience in terms of the model to be used for intervention. The therapist provides information concerning the practical implications of the chosen model of therapeutic intervention, to allow the service-user to fully engage with and understand both the therapeutic process and the rationale for intervention." (p.343)

This process of socialisation has historically been considered crucial to therapy in order to collaboratively share understanding between therapist and client and is a recommendation made in the majority of CBT textbooks and treatment models, yet it is based on no direct clinical evidence and is simply clinical lore. It is thought that unless a client is socialised to the model then they will not be able to engage with therapy as they would not understand the process or aims of therapy.

It is important that such fundamental elements of the CBT model have empirical foundation, but currently this is difficult because there are no scales or measures that can be used to assess whether someone is 'socialised'. In order to evaluate whether socialisation is related to outcome, or even a useful therapeutic construct, it is important to be able to measure whether a client is socialised.

In one of the few published studies to measure socialisation directly, Daniels and Wearden (2011) investigated socialisation to the model in fifty adults engaged in 'pragmatic rehabilitation' for chronic fatigue syndrome (CFS), a collaborative therapy based in CBT with the aim of developing and engaging in a graded return to activity. They extracted all utterances about CFS and its management that were made during the final therapy session from therapy tapes. These were then rated on each of the key socialisation dimensions identified in Roos and Wearden (2009) namely concordance, explicit understanding, making active plans and evidence of applying the principles congruent with the treatment model. They also rated resistance (evidence of applying principles incongruent with the model, resistance and avoidance). The number of utterances related to socialisation and avoidance was then totalled. They found that the ratings had good internal consistency but reported the associations between socialisation and working alliance dimensions rather than total socialisation and resistance scores.

There is evidence that therapist socialisation behaviours are associated with better working alliance in youth CBT. Karver et al. (2008) investigated which specific therapist behaviours during the first two sessions of therapy contributed to working alliance at the third in young people between 13 and 17 attending therapy for depression. The authors describe therapist 'socialisation' behaviours as presenting a treatment model, presenting a collaborative approach and formulating goals. To measure this, and other possible variables, they developed a rating scale to evaluate two 10-minute segments of session one and two of therapy. They then investigated which therapist behaviours were associated with better alliance at the third session. They found some support for behaviours that form part of the socialisation phase of CBT being related to better working alliance. The extent to which the therapist engaged in socialisation behaviours at session 1 and 2 correlated with reported therapeutic alliance at session three (.33 and .41 respectively) but due to a small sample size this did not quite reach significance ($p=0.12$). However, this was a pilot study using 23 participants and the authors acknowledge that it was probably under-powered. A similar study found that presenting CBT treatment as collaborative, which is part of the socialisation process, improved alliance (Creed & Kendall, 2005).

It seems that socialisation may be a measurable phenomenon and doing this early in therapy may be related to better alliance in young people, however the studies above only examined therapist behaviours and not young people's understanding. It is possible that

despite therapists 'socialising' the young people they were not 'socialised'. They also did not investigate whether socialisation is important in terms of outcome.

Methodologies used in the above studies may be inappropriate to measure young people's understanding of therapy. It may be appropriate to measure therapist behaviours and client responses by listening to audio recordings in adult research studies but young people are unlikely to be as forthcoming with verbal responses which display understanding of the model and process of therapy. This is partly informed by clinical experience but is also due to the inherent power imbalance that exists in therapy and the stage of development of the young person. For example, an adolescent's zone of proximal development (see Vygotsky (1978)) in terms of knowledge and understanding of therapy is likely to need scaffolding by the therapist and therefore limits the number of spontaneous verbal responses that could be scored in this manner. Young people may also be at different stages in their emotional and social development which affect how confident they are at asserting themselves.

The aim of this study therefore is to develop and pilot a tool in which to investigate socialisation in young people. The primary hypothesis is that the interview and written task will be capable of measuring socialisation to the CBT model. The secondary hypothesis is that higher socialisation scores will be related to better outcome in therapy, although this will be given less attention due to the pilot nature of the study.

Method

Participants

Sixteen young people aged 12-17 were recruited from local child and adolescent mental health services (CAMHS). A total of 75 young people were invited to take part resulting in a response rate of 21.3%. All participants had either completed or almost completed CBT for depression or anxiety in the previous twelve months. Young people with learning disabilities or a current episode of psychosis were not recruited. Young people with autism were not invited to take part as they were eligible for a similar project running concurrently (Roberts-Collins, 2016).

Ethical permission was granted by the South-East Scotland NHS Research Ethics Committee and the University of Bath Psychology Ethics Committee.

An a-priori power calculation was not possible due to the lack of research on which to base estimated effect sizes. The pilot nature of the study means that the authors recognise the likelihood that the sample is likely to be underpowered.

Measures

Socialisation

Socialisation was measured via semi-structured interview, a pilot written measure of socialisation and therapist subjective ratings of socialisation.

Socialisation Interview: The semi-structured interview, designed by the authors, consisted of questions about participants' experience of receiving CBT, what they found useful about CBT, what skills they learned from CBT and what they were asked to do between sessions (see appendix G). Participants were also given the opportunity to add any relevant information about their CBT. The interview was co-designed by young people with experience of receiving CBT. They assisted with the introductory explanation, wording and ordering of questions and suggested alternative ways participants could opt not to answer a question.

Questions were designed to target the socialisation dimensions outlined by Daniels and Wearden (2011) without leading the participant to certain responses. Participants were informed that they were being asked about their CBT sessions overall and not the reasons they were attending therapy and therefore did not need to share private information. The interview was piloted by clinical psychologists role-playing young people that they had worked with and with young people known to the researchers. No changes were made after piloting the interview.

The interview was recorded and each utterance relevant to CBT was extracted and transcribed by the interviewer. The interview transcript was then scored independently by one of the authors who did not conduct the interview. The interview was scored using criteria based on the socialisation dimensions outlined by Daniels and Wearden (2011). See table 1 for details about the dimensions which were scored and appendix I for a copy of the scoring criteria. 10% of transcripts were also scored by an expert in socialisation at the University of Bath but formal inter-rater reliability analysis was not possible on such a small sample. Overall the scores were moderately similar.

Each utterance could be awarded a maximum of five points (one for each socialisation dimension) but as there was no limit on the number of utterances extracted there was no

maximum score achievable. If a participant did not make any utterances relevant to socialisation then they would score zero. For the language dimension participants scored one point for every word relevant to the CBT model they used, although each word could only be awarded a point once. For example if someone said “*I had been really low and I didn’t understand why so we worked out what was going on in my mind and why I was so scared of my feelings*” they would score four for language (low, mind, scared, feelings), one for explicit understanding of the model (looking at thoughts and feelings in relation to feeling low) and zero for the other dimensions for a total of five points for that utterance. If the participant used the word ‘low’ again, for example, they would not score another point for use of language.

It is expected that higher scores on the interview will relate to better socialisation.

Table 1: Overview of the socialisation dimensions and when a score would be awarded.

Socialisation dimension	When a score would be awarded
Explicit understanding	If participants spoke correctly and appropriately about the CBT model
Concordance	If participants spoke in a way that suggested they agreed with the model
Applying principles	If participants gave examples of situations where they used the CBT model
Active planning	If participants forecasted their use of the CBT model
Language ¹	If the participant used terminology associated with CBT that would not be expected in everyday conversation

¹ A table of example words that could be included in the scoring of this was compiled and used as a reference for this dimension. These words were gathered from terminology used in commonly used child CBT texts such as Think Good Feel Good (Stallard, 2003) and from discussions with clinicians.

The CBT skills task - (designed by the authors and described fully by Roberts-Collins (2016)) is a novel written task consisting of a short vignette about a young person with generalised anxiety followed by questions asking participants to deduce his thoughts, feelings and behaviours and how these are connected. It also asks participants to suggest what needs to change for the young person to get better and asks them to design a relevant homework task. Possible scores range from 0 to 20 with higher scores expected to correspond with better socialisation.

There is no current measure of socialisation available so construct and face validity was assessed by clinical psychologists in training at the University of Bath. The measure was completed by 14 clinical psychologists in training who scored an average of 17.2, suggesting that people with expertise in CBT score at ceiling level. Ecological validity is likely as it was designed in collaboration with young people with experience of CBT. The measure has good inter-rater reliability ($\alpha = .97$).

Therapist Rating: The participant's therapist was contacted via email, telephone or letter and asked to rate their subjective impression of how socialised to the model the participant was on a scale of 0 (not at all) to 10 (very well socialised). Clinicians were given a definition of what the research team meant by 'socialisation'.

Clinical Outcome

Clinical improvements made during therapy were measured using routine outcome measurements and subjective ratings by participants and their therapist. A heterogeneous set of routine outcome measures were used due to CAMHS used within the recruitment area adopting different measures.

Routine Outcome Measures

Most services used the Revised Child Anxiety and Depression Scale (RCADS; Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000) as their primary outcome measure. This is a widely used 47-item self-report measure of childhood anxiety and depression. It has good reliability and validity (Wolpert, Cheng, & Deighton, 2015). Clinicians were asked to provide copies of the RCADS completed pre- and post-therapy by each participant.

Other measures the services used included the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997), the PHQ-9 (Kroenke et al., 2001), the Eating Disorder Examination (Fairburn & Beglin, 1994) and the Child Yale-Brown Obsessive Compulsive Scale (Scahill et al., 1997). All are widely used measures within CAMHS.

Subjective ratings

The Global Improvement subscale of the Clinical Global Impressions scale (CGI; Guy, 1976) is a widely used standardised, single-question assessment of global improvement or worsening from baseline. It requires participants to rate their improvement on a seven point scale ranging from 'very much improved' to 'very much worse'. Both participants

and clinicians were asked to complete this measure. This measure is widely used in treatment studies (e.g. Compton et al., 2010).

Procedure

Participants contacted the researchers after being informed about the study by their clinician. They were screened by telephone or email to ensure they met eligibility criteria, then were seen at their home for the appointment at which point the research assessments were administered. Participants gave informed consent then completed the semi-structured interview and the CBT skills task. The appointments lasted around 30 minutes in total. After the study they were debriefed and given a £5 voucher for their time. Their CAMHS therapist was contacted, with the participant's permission, and asked to provide their routine outcome measures scores pre- and post-therapy, alliance score, subjective opinion of how socialised to the model the participant was during therapy and CGI. Despite several attempts to collect data from clinicians this was not possible for all participants due to clinicians moving services, being on maternity leave or not responding to emails or telephone calls.

After the appointment the CBT skills task was scored and entered into a database. All relevant utterances from the interview were transcribed and passed to another member of the research team who scored it according to criteria outlined above in order to limit bias. Two of the interviews were scored by a second rater to examine inter-rater reliability. Scores from both raters were similar although formal inter-rater reliability analysis was not possible due to a small sample of double-rated interviews.

Data Analysis

Data preparation

Firstly scores on the socialisation interview and CBT task were combined to create a total socialisation score.

The intention of the researchers was to calculate clinically significant change scores for the routine outcome measures but this was not possible due to difficulty finding suitable non-clinical comparison data. Instead, in order to determine whether dichotomous categorisation is useful given the small, relatively homogenous sample, three widely used methods of categorisation were used. Firstly, participants were classed as treatment responders if they moved from above to below the clinical cut-off on the relevant ROM throughout the course of treatment (i.e. 'caseness'). Secondly, they were classed as

treatment responders if their therapist rating a score of 1 or 2 ('very' or 'much' improved) on the CGI. Thirdly, those who reported a decrease in their baseline ROM score of 25% or more were considered treatment responders.

To address the primary hypothesis that it is possible to measure socialisation, total socialisation score, the socialisation interview score and CBT skills task score were entered into correlation analyses with the clinician's subjective rating of the participant's socialisation. These three scores were analysed separately to assess whether the interview or written measure captured socialisation more accurately than the other or if an overall score was most representative. This analysis was based on the presumption that the clinician's rating of socialisation is an accurate estimation of actual socialisation although the limitations to this are considered in the discussion.

Finally, to address the secondary hypothesis that better socialisation is related to better outcomes the socialisation measures and percentage change on routine outcome measures were entered into a correlation analysis.

Results

Participants had a mean age of 14.9 (SD 1.7) and were mostly female (75%). The distribution of ages can be seen in table 2.

Table 2: Age distribution of the sample

Age	12	13	14	15	16	17
Frequency	1	4	1	4	2	4
Percent of sample	6.3	25	6.3	25	12.5	25

Of the 16 participants, 12 had complete datasets. Means, standard deviations and ranges on a number of measures can be found in table 3. Of the four incomplete datasets, two participants did not have outcome data available but the clinicians provided their ratings of socialisation and CGI. The therapists of the remaining two participants did not respond to email or telephone contact.

Measuring socialisation

Descriptive data from the socialisation interview, CBT skills task and clinician ratings of socialisation can be found in table 3. Both of these scores contributed comparably to the

total score. Overall the language, explicit understanding and concordance sub-categories contributed the most to the socialisation interview scores (22.8%, 22.8% and 39.2% respectfully) with little contribution from the other two sub-categories (8.2% and 6.3% respectfully). Given this difference it is unsurprising that Chronbach's alpha suggests the socialisation interview does not have internal consistency (alpha = 0.39).

Table 3: Mean and standard deviations for the full sample on various measures.

	Mean (SD)	Range
Socialisation Interview Total (n=16)	15.8 (5.6)	6-28
- Explicit Understanding	3.6 (2.3)	0-9
- Concordance	3.6 (2.2)	1-8
- Applying Principles	1.3 (1.1)	0-3
- Active Planning	1.0 (0.9)	0-3
- Language	6.2 (3.0)	3-15
CBT skills task (n=16)	13.3 (2.4)	10-18
Total Socialisation (n=16)	29.0 (6.5)	18-41
Clinician rating of socialisation (n=14)	7.9 (1.3)	5-10
Percentage change on ROMs (n=11)[†]	42.4 (17.3)	17-73

[†]One participant was excluded due to being a significant outlier. Further information is reported below.

The assumption of normality was tested using the Shapiro-Wilks test for the total socialisation score, clinician rating of socialisation, the socialisation interview and CBT skills task. Results suggest that normality can be assumed for all four scores (all p s > .05). Scatterplots did not reveal any significant outliers.

To address the primary hypothesis, relationships between the measures and the clinician rating of socialisation were investigated. A Pearson correlation found a small positive relationship between the total socialisation score and clinician rating of socialisation. A further Pearson correlation found a moderate positive relationship between the CBT skills task and clinician rating of socialisation but no relationship between the socialisation interview score and clinician rating of socialisation. There was a strong relationship

between the socialisation interview and total socialisation score which is likely to be because the wider range of values, as outlined in table 3, contributed much of the variance within the total score. None of these correlations reached significance, however, which means that conclusions are limited given the small sample size.

Treatment response

Participants' treatment response was categorised using three methods as described above. Table 4 shows treatment responders and non-responders in all three categories. These achieved similar total socialisation scores and a T-test suggests there are no differences between participants grouped into 'caseness' (chosen for its roughly equal groups) ($t(10) = 2.87, p=0.12$) suggesting that grouping treatment response categorically is not helpful. Percentage change scores were used as a continuous variable in subsequent analyses.

A non-parametric Spearman's rank order test found a moderate correlation between therapist and young person CGI ($r = .34$).

Table 4: Total socialisation means, standard deviations and ranges when different 'treatment success' categories are applied.

	Caseness		CGI		Percentage Change	
	<i>Responder (n= 7)</i>	<i>Non Responder (n=5)</i>	<i>Responder (n= 11)</i>	<i>Non Responder (n=3)</i>	<i>Responder (n= 9)</i>	<i>Non Responder (n= 3)</i>
Total Socialisation score Mean (SD)	28.7 (5.1)	32.0 (7.8)	30.0 (4.5)	31.7 (10.1)	30.0 (5.0)	30.3 (10.1)
Range	21-33	22-41	22-37	21-41	22-37	21-41

Relationship between socialisation and outcomes.

The percentage change between scores on routine outcome measures pre and post therapy was used to determine treatment outcome. Mean percentage change scores can be found in table 3. Examination of the scatterplots revealed a significant outlier in the percentage change data so this was removed. This was someone whose routine

outcome measurement scores significantly increased after treatment which is opposite to all other participants.

Table 5 shows correlations between measures of socialisation and outcomes. Pearson correlation found a moderate relationship between percentage change on outcome measures and both the total socialisation score, the socialisation interview and the clinician rating of socialisation although none of these reached significance, possibly due to the small sample size.

Table 5: Correlations (r) between socialisation and outcome measures.

Measure	Total socialisation score	Socialisation interview score	CBT skills task score	Clinician rating of socialisation	Percentage change on routine outcome measures
Total socialisation score	-	-	-	-	-
Socialisation interview score	$r(14) = .92,$ $p < 0.001$	-	-	-	-
CBT skills task score	$r(14) = .51,$ $p = 0.04$	$r(14) = .15,$ $p = .58$	-	-	-
Clinician rating of socialisation	$r(12) = .30,$ $p = 0.29$	$r(12) = .16,$ $p = 0.59$	$r(12) = .37,$ $p = 0.19$	-	-
Percentage change on routine outcome measures	$r(9) = .42,$ $p = 0.20$	$r(9) = .41,$ $p = 0.21$	$r(9) = .13,$ $p = .71$	$r(9) = .42,$ $p = 0.19$	-

N.B. numbers vary due to a lack of outcome data received from clinicians of some participants.

Discussion

This study investigated socialisation to the CBT model in a sample of young people. Overall the study suffered from a small sample size and therefore lack of power, meaning that conclusions about whether socialisation is important are difficult to make. The study procedure, however, was able to highlight some needs for this under-researched area which would be useful for researchers in the future.

Socialisation interview

When designing the study, it was predicated that assessing socialisation based on rating spontaneous utterances during therapy would be inappropriate in a sample of young people. The interview, therefore, was designed to specifically ask about socialisation whilst keeping the questions open-ended so not to be leading. It seems that this direct but open-ended questioning may be unsuitable as the interviews were generally around 5-10 minutes in duration, meaning little can be concluded. Questions in the interview were designed to specifically target the dimensions of socialisation outlined in the definition by Roos and Wearden (2009) and it still seems useful to limit variation in such a new research area.

Future research may wish to ask a wider variety of questions. These could include open-ended and multiple choice as well as questions which are more able to explore the participant's explicit understanding and ability to apply the principles. These could involve explicitly asking the young person to explain what they understand about thoughts, feelings and behaviours and how they are connected, how these might be important and how they could use this knowledge to help when they or someone else feels sad or upset. This would allow the young person to explain their understanding and show their ability to apply the principles.

It is possible that asking open-ended questions is not suitable for adolescents because of difficulties in young people's abstract and concrete reasoning skills or a difficulty communicating complex constructs verbally. According to Piagetian theory (see Piaget & Inhelder, 1958) the young people in this sample would be in the 'formal operational stage' suggesting they are developing skills in abstract reasoning. This raises the issue of age and level of cognitive development. The current sample ranged from 12-17 years and therefore probably captured a wide variation in cognitive abilities as well as ability to comprehend questions about an abstract concept such as socialisation. It is possible the interview is simply measuring verbal skills rather than understanding of socialisation.

Future research may wish to use a more similarly aged sample or recruit a sample large enough to be able to control for age and verbal abilities.

CBT skills task

The young people in the sample responded well to the CBT skills task and found it accessible. It is possible that the separate elements of the task, the identification of thoughts, feelings and behaviours, identifying the connection between these and the application of this knowledge to an individual difficulty, would be more appropriately scored independently of one another. This would allow more specific understanding of the young person's socialisation. For example if this were used in routine clinical practice and it was clear that the young person could identify thoughts, feelings and behaviours but not connect them or apply them to a difficulty then the clinician could recap psychoeducation or use this as a discussion tool.

To be useful as a research tool it would be beneficial to develop more vignettes to apply to a wider range of clinical presentations. A generalised anxiety presentation was thought to be most accessible and recognisable to young people so was chosen for this study but it would be useful to develop vignettes describing other anxiety presentations and depression so that the young person had several opportunities to apply their knowledge. Similarly to the above if a consistent pattern was shown if this was used in routine clinical practice then it could guide an intervention.

Other considerations

The concept of socialisation is theoretically similar to the 'task' element of Bordin's tripartite model of working alliance (Bordin, 1979) which is related to clinical improvement (Shirk, Karver, & Brown, 2011). For example, the task element is described as the agreement between therapist and client about what needs to be done by each party to achieve their goals (Bordin, 1979). This is also an element of socialising a person to the model although according to the definition by Roos and Wearden (2009) socialisation also involves the negotiation of a shared understanding of the issues and sharing of a formulation. Crucially it also suggests that there needs to be agreement between the therapist and client about what would help.

Future research would benefit from controlling for working alliance so that conclusions can be made about the specific effect of socialisation on outcomes. The current study attempted this but as data were all collected retrospectively there were limited alliance measures completed so this was not possible. Future research would benefit from

recruiting participants at or prior to the beginning of therapy rather than the end so that participants can complete specific measures of alliance at key sessions.

It is unclear whether the clinician's rating of socialisation is a true representation of a young person's socialisation but as there is currently no alternative method this was the best estimate available. The clinicians did not report this figure blindly and were aware of the young person's treatment response. It is possible that clinicians' tended to recruit people who responded well to treatment. Recruiting people prior to starting therapy would also help with this, as would actively recruiting people who did not respond to therapy.

A strength of this study is that the measures were designed in collaboration with young people who have experience of CBT so they were likely to be accessible to this group. They were based on a formal definition of socialisation (Roos & Wearden, 2009). It also captured a wide range of ages and, although not formally measured, participants seemed to be heterogeneous in their presenting problems.

Future research

Socialisation is a new research area and as such has many interesting unanswered questions. What is the causal relationship between socialisation and engagement in CBT, engagement in exposure tasks and outcomes? What is the pattern of socialisation over the course of therapy? What do therapists do that encourages socialisation? In child CBT is parents' socialisation important? Is socialisation different in people presenting with depression compared to anxiety? Is it different in psychosis or physical health conditions?

There is a long way to go before it is possible to answer these questions. For this to be possible it is necessary to be able to measure socialisation. A written task would be most appropriate considering the large samples that are required to answer many of these questions. The written task used in this study seems accessible to young people and has potential to be developed and refined further with the considerations outlined above.

Conclusions

This study examined the role of socialisation to the model in young people experienced in cognitive behavioural therapy. A small sample size precludes conclusions being drawn but important lessons about conducting research in this new area were learned and discussed.

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Socialisation to the Model in Adolescent Cognitive Behavioural Therapy: Measurement and Relationship with Clinical Outcomes – An Executive Summary.

What was the research about?

Cognitive behavioural therapy is a talking therapy that is commonly used to treat mental health difficulties across all age groups. At the centre of CBT is the understanding that a person's thoughts, emotions and behaviours are interlinked and changing what someone thinks or does can affect how they feel.

'Socialisation to the model' is a term used in cognitive behavioural therapy (CBT) to describe the process of collaboratively coming to an understanding about the difficulties a person is experiencing and how to help relieve this. It involves the client coming to an understanding of their difficulties from a CBT perspective and what engaging in CBT would mean for them.

Despite being recommended as a foundational step in almost every CBT textbook, very little is known about socialisation. This study investigated whether it is possible to design a measure of socialisation in a sample of young people and whether it is related to clinical outcomes.

How was this measured?

No research has been published measuring socialisation in young people so we had to design our own measures. There were two measures: one semi-structured interview and one written task. Both were designed with the help of a group of young people who had completed therapy in the past. The interview consisted of questions about the person's experience of therapy, what they had learned, what was useful and other details about their therapy. They were asked to rate how much they feel like they had improved. The written task involved the participants reading a short story about a teenage boy who has difficulties with anxiety. They were asked to identify his thoughts, feelings and behaviour and how these are linked, to suggest what needs to change for him to feel better and to design a homework task which could help with this.

We also asked their therapist to rate how socialised they thought the young person was on a scale of 0-10, how much they think the young person improved over the course of

therapy and to provide scores on the questionnaire measures they completed before and after therapy.

Who took part?

Sixteen young people between 12 and 17 took part in the research. The average age of participants was 14. They were recruited through local child and adolescent mental health teams and either had completed CBT for anxiety or depression within the last year.

What was found?

It is difficult to tell what the results are due to the small sample of people who were able to take part. We were able to learn a lot about the methods of researching this topic in the future. We were able to make comments about the possible ways this can be taken further by future research.

Connecting Narrative

The doctorate in clinical psychology at the University of Bath is firmly committed to delivering training in evidence-based approaches. This is reflected in a focus on providing training in skills that encourage both proficiency and critical thinking toward therapy and the therapeutic process. This critical thinking led me to question which elements of the therapy process are important to both therapists and clients. This question has been in my mind throughout clinical training and this connecting narrative will use this question to consider the three main research elements of the course (main research project, service improvement project and critical literature review) as well as the five case studies that I have submitted.

The course quickly encourage trainees to consider possible areas of research interests and although never having worked therapeutically with children I have always enjoyed interacting with and learning about children and childhood. At this early stage of the course, whilst developing ideas about areas of research interests, I still perceived myself as a novice at specific therapeutic techniques, having never provided therapy previously. I believed that a strength of mine, however, was developing strong therapeutic relationships with the people I was working with so I contacted Dr Maria Loades who has a research interest in this area.

I was aware of the research around the importance of a strong therapeutic relationship and the connection between the strength of the relationship and outcomes but after discussion with Maria I wondered whether a better relationship also made other CBT processes more effective or easier to engage in. One idea that came to mind was whether a strong relationship allowed young people to engage in exposure tasks more readily. The rationale was clear; it made sense that a strong, trusting relationship between therapist and client is likely to support the client to be willing to take risks and expose themselves to something potentially distressing. However, after reviewing the statistics and power analysis it seemed that a sample of over 300 would be required to detect an effect so this was not going to be possible in the scope of a doctorate research project.

Together with Dr Ailsa Russell, in early 2014, we discussed other CBT processes which may be interesting to investigate in a sample of young people. Maria was aware that, for her doctorate thesis, another tutor in the department, Dr Jo Daniels, investigated socialisation to the model in an adult sample. It was agreed that this would be an

interesting area of research since it is widely regarded as important in the process of forming the relationship and initialising therapy yet there are very few research studies investigating this with adults and none with young people. We agreed that since there is so little research, it would be useful to develop a measure of socialisation which could be used more widely in research but also in clinical settings. The initial project, therefore, aimed to design and validate a written measure of socialisation.

Around this point a fellow trainee, Cara Roberts-Collins, had the unfortunate experience of her main research project falling through. Ailsa, with her interest in autism, thought that the current project would also be interesting in a sample of people with ASD. Cara agreed that this would be interesting and began working on a similar project. We discussed possible ways to measure socialisation and agreed on asking young people to read and answer questions from vignettes of people with mental health difficulties and the summer was spent clarifying the rationale, writing the proposal, designing vignettes and meeting with young people with personal experience of therapy.

At the University of Bath we have a renowned expert in child CBT, Professor Paul Stallard, so we contacted him for his thoughts on the project. Professor Stallard, being a busy clinician and researcher, took some time to reply but in late 2014 agreed that socialisation was a useful area of investigation however a written measure enquiring about a third party's mental health needs may be difficult to draw conclusions from and even redundant if socialisation to the model is not an important process in terms of outcomes. He advised a 'step back' and to investigate an earlier research question: Do young people need to understand a theoretical account of what they are being asked to do in order to make improvements? The only way we could foresee addressing this question was to conduct semi-structured interviews to measure the extent to which a young person understood their specific therapy experience and to see whether an understanding was associated with better clinical outcomes. We did, however, see a value in using a small sample of the vignettes that we designed to assist this so included a single vignette to use alongside the interview.

The study then had to be re-designed to fit this new approach. This took time, as did the NHS IRAS application. The IRAS application was frustrating to complete. It seemed very repetitive and unnecessarily detailed given the relative simplicity of this project compared to, say, a large-scale randomised controlled trial of a new medication, yet the application process is largely the same. There is an option, if the study is straightforward, to have a 'proportionate review' of the study instead of it being presented to a panel, but even this

required the application form itself to be completed in full and this study did not qualify for this as it involved asking the young people to complete an un-validated measure. This is a worrying system as it could possibly discourage psychologists in routine clinical practice from conducting research due to the time the application takes as well as the level of detail one is expected to go into. Thankfully, I expect that having navigated it once may make it easier in future attempts so I will use this experience to learn from in my future as a clinician interested in research.

The experience of data collection has shown me the difficulties of relying on other people to identify participants. It seems to me collecting data for a study within your clinical service has many advantages. Even with our very broad inclusion criteria – almost any young person who has had CBT in the last year is eligible – it was incredibly difficult to recruit participants. Services who alluded that they had many participants did not follow through and of those who did the take-up was low. Most of the clinicians identified participants for the study and sent them letters. The response rate from these was low. However, when participants were contacted directly by the clinician over the telephone almost all agreed to take part. This seems to be a much more efficient method of data collection but it is more time consuming for the clinician. These two options were presented to clinicians, including the rationale for the telephone call, but most chose to send letters. If the research was being conducted within your clinical service it is likely to be more embedded within the team, you are able to remind people and people may choose to take part with more confidence. This study has not put me off research in the future but I will take these learning points forward with me. I also suspect that to some extent recruitment into the study was limited by clinicians worrying about feeling the quality of their therapy would be judged and only selecting 'successful' cases or people who would be 'good' at the research, despite being made clear that this was not the case and that we were interested in inviting everyone eligible to the study. I can empathise with this as I expect I would have similar feelings but will remember the difficulties this may have caused for the research, and the representativeness of the sample, in my future as a clinician.

In contrast, recruitment for my service improvement project was relatively straightforward. In this instance I had the support from someone who was heavily invested in recruiting as it would be to her benefit to get an adequate sample. The project came about after a different project fell through after around a year of planning and negotiating. After the previous project fell through in early 2015, this project came to my attention in the summer of 2015 so needed to be developed quickly. Luckily, by the nature of service improvement

projects they are led in part by the service and it is in their interest to assist in developing and supporting the project. Catriona Glen, a heart failure nurse specialist at a local hospital approached the psychologist at that hospital, Mike Osborn, and asked for help identifying how her patients could be better supported psychologically and emotionally by the service. Catriona works within a wider cardiac ward but is the sole heart failure nurse and was clear that no funding was available to provide psychological support in terms of input from a psychologist or a therapy group. Therefore she was clear that she needed to know what help people would find useful within the constraints of a busy service run by a single nurse and at what point in their care people would receive the most benefit from this.

This project, therefore, remains along the theme of therapeutic processes but applied to a different population – those who may not have a diagnosable mental health issue – and within a different context – an acute service where the foremost clinician is not formally trained in providing therapy. The research literature is clear that this group of people have a high burden of emotional difficulties but that did not particularly help a single nurse running a busy service know how to help her patients most effectively. She wanted help identifying and filling the gaps in the service which could not be done with the literature. She needed someone to speak to these patients and find out what they thought of the care provided and what would have been useful for them. This is very different from the main research project, with its focus on the minutiae of therapeutic processes, but is in essence attempting to answer the same question: what small differences can we, as clinicians, make to our practice in order to help our clients?

This important question applies equally to the minutiae of therapy as it does to the broad models on which we base our understanding of people's difficulties. If clinicians want to make small differences to their practice then maybe the most fundamental small difference is choosing the most appropriate therapeutic model for our clients. In this regard, my literature review into the formulation models of body dysmorphic disorder aimed to help clinicians working in this area better understand the strengths and weaknesses of the two primary formulation models they may be familiar with and for researchers in this area to understand the gaps in the literature and possible future directions.

After proposing several ideas for a review I realised that similar clinical disorders such as social anxiety, OCD and eating disorders had reviews of the formulation models but body dysmorphic disorder did not. I contacted the author of one of the models, Dr David Veale,

to ask whether he was aware of this work being done elsewhere and he was not. I spent some months developing an inclusive search criteria and building a rationale for the project and by early 2014 I was ready to conduct my final searches and gather the data. A few weeks after the final search I received an email from PubMed alerting me to new papers that match my search criteria, including a new review of body dysmorphic disorder which included a review of the models. After an initial panic it was clear that although this paper was interesting, comprehensive and published in a well-respected journal the review I had planned was still worth proceeding with, not least because this other review was not replicable and presented a more general overview than I had planned. A strength of my review compared to this one is its transparency, impartiality, replicability and specificity to the maintenance element two formulation models.

This review gave me opportunity to adopt a critical approach to CBT research and the evidence base which contributes to developing theoretical models. The only way to do this in a complex area with clarity and transparency was to address each element of the models individually. This was difficult because of significant overlap between the models and also the lack of clarity about some elements and this made structuring the project difficult. Finally I was happy with the structure and writing suddenly became much easier. The difficult then was limiting the word count as it is a vast area to cover. Thankfully, support from my supervisors, Dr James Gregory and Dr Emma Griffith, made this simpler and their questions, which brought me back to the purposes and scope of the review, helped me to gain perspective about the important elements to include and to discard.

These questions about what I, as a reader of these papers, would want to know has vastly helped with the writing of them and is something I will aim to remember in my future writing. It also helped with the final case study that I wrote, which was significantly shorter than the previous case studies. I had written all I felt I needed to write to explain to myself, the reader, what I had done, why I had done it and what I had found. The purpose of continuing writing would be in service of increasing the word count rather than increasing the quality so I stopped. I think this is a reflection of the progress I have made as a clinician, a researcher and a writer over the three years on the course. As part of the process of writing this connecting narrative I re-read the case studies from earlier in the doctorate and whilst they are acceptable and interesting, I believe my skill and confidence as a therapist has progressed.

My first case study was written on a case that was successful as, even though we were explicitly told any interesting case is acceptable, to write any other, less successful cases

as a first example of my clinical work to the course was daunting. I feel that I am at a point in my training where writing up successful cases is less important than writing up cases with interesting learning points. My final case study is an example of this. The group intervention seemed relatively successful when we asked the participants for feedback, however the scores on formal measures of outcomes were not particularly impressive. Despite this the intervention was different from the usual intervention provided by the service and so a case study was a useful opportunity to evaluate this.

Case studies were also an opportunity to use single case experimental designs, which is useful considering both of my research projects involve cross-sectional designs. This has made me realise that using experimental design is possible in routine clinical work and provides more confidence in the efficacy of the intervention. One of these case studies has been submitted for publication.

Overall, I believe that my research projects have encouraged me to think about therapy more broadly. Over the three years I have learned the specific skills to use in therapy but this research has encouraged me to take a step back and evaluate the simple decisions I make – what theoretical model am I using? Does this young person understand what we are doing? What is helpful for this person right now? – which has encouraged a reflexivity in my work that was not present prior to training.

I look back on my research career as a period of learning and I do not expect this to stop at the end of clinical training. Prior to the doctorate I was fortunate to work as a research assistant conducting clinical interviews and working with databases. I believe this experience has been invaluable in the collection and handling of data, however I was not aware of the complexity and intricacies of research design and planning. My experience on the doctorate has given me insight into the amount of work it takes to reach the point of seeing the first participant. I will not underestimate this in my future as a clinician. I fully intend to incorporate research into my career, even if this is not through formal projects involving grants and ethics committees immediately after qualifying. On my final year clinical placements I have found myself using my research skills in my day to day work when reading papers or hearing about new initiatives being developed within the service. I am sure that these skills will be used to develop the services I work within in the future. I am in the fortunate position to have a job secured upon graduation from the doctorate. This is within a child and adolescent mental health service and I am sure my research experience strengthened my application and interview. The job is in a newly developed psychological therapy service which I am sure will bring many opportunities to continue

using my research skills and I will take with me the experience and learning points that I have gathered over the previous three years.

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Appendix A: Papers excluded from the critical literature review.

Paper	Reason for exclusion
Bohon, Hembacher, Moller, Moody, and Feusner (2012)	MRI study
Deckersbach et al. (2000)	Described neuropsychological profile
Feusner, Moody, et al. (2010)	MRI study
Feusner, Hembacher, Moller, and Moody (2011)	MRI study
Feusner, Townsend, Bystritsky, and Bookheimer (2007)	MRI study
Walker, Murray, Lavender, and Anderson (2012)	MRI study
Labuschagne, Castle, and Rossell (2011)	Case studies paper
Jefferies, Laws, and Fineberg (2012)	Face recognition. Not a maintenance factor.
Buhlmann, McNally, Etcoff, Tuschen-Caffier, and Wilhelm (2004)	Emotion recognition. Does not map onto any maintenance model. The paper does make reference to beliefs about interpretation of emotion but this was a possible interpretation of the data rather than what the paper intended to study.
Buhlmann, Etcoff, and Wilhelm (2006)	Continuation of the emotion recognition work above
Buhlmann, Winter, and Kathmann (2013)	Continuation of emotion recognition
Feusner, Bystritsky, Hellemann, and Bookheimer (2010)	Identity recognition of emotional faces – does not map onto any maintenance process

Appendix B: Table of papers included in the critical literature review.

Study, Location and Maintaining Factors	Aims	Methodology and Primary Measures	Sample*	Findings
<p>Anson et al. (2012)^{f, g}</p> <p>UK</p>	<p>To evaluate social- and self-evaluative appearance concerns in BDD.</p> <p>To investigate the extent of concerns related to overall appearance compared to specific disliked features.</p>	<p>Cross-sectional group comparison questionnaire design.</p> <p>Measures:</p> <p>Multidimensional Body-Self Relations Questionnaire - Appearance Scales (Cash, 2000)</p> <p>Fear of Negative Appearance Evaluation Scale (Thomas, Keery, Williams, & Thompson, 1998)</p> <p>Self-Social Appearance Concerns Scale (novel scale)</p>	<p>BDD: 41 (56.1% female, mean age 29.9)</p> <p>Non-clinical controls: 41 (58.5% female, mean age 32.4)</p> <p>Severity of BDD was measured using the BDD-YBOCS (mean = 30.6)</p>	<p>BDD participants reported high levels of importance and anxiety associated with perceptions of others' view of their appearance as well as their own.</p>
<p>Baldock et al. (2012)^{b, d}</p> <p>UK</p>	<p>To investigate internal and external criteria for stopping mirror gazing in BDD.</p>	<p>Cross-sectional group comparison.</p> <p>Semi-structured interview and novel questionnaire.</p>	<p>BDD: 21 (62% female, mean age 33)</p> <p>Non-clinical controls: 18 (66% female, mean age 30.4)</p>	<p>Internal goals such as 'feeling right' were rated as more important than in the BDD group however there was no difference in external goals.</p>

			Severity of BDD was measured using the BDD-YBOCS (mean not reported, although all over 20)	
Buhlmann, Etcoff, et al. (2008) ^g USA	To investigate perfectionism and attractiveness ratings in BDD, OCD and non-clinical controls.	Experimental design. Facial attractiveness of both strangers varying in attractiveness and their own face. Frost Multidimensional Perfectionism Scale (Frost, Marten, Lahart, & Rosenblate, 1990)	BDD: 19 (68% female, mean age 32.6) OCD: 21 (52% female, mean age 31.9) Non-clinical controls: 21 (57%, mean age 33.9) Severity of BDD was measured using the BDD-YBOCS (mean = 25.2)	BDD rated attractive photos as significantly more attractive than the other groups and rated their own faces as less attractive than did the other groups. Both clinical groups reported more perfectionistic thinking than controls
Buhlmann, McNally, et al. (2002) ^h USA	To investigate selective processing of threat.	Cross-sectional, group comparison Stroop paradigm for both general and BDD-specific threatening and positive words.	BDD: 16 (93.8% female, mean age 33.5) Non-clinical controls: 16 (81.3% female, mean age 33.9) Severity of BDD was measured using the BDD-YBOCS (mean = 25.6)	People with BDD have difficulty maintaining attentional focus in the presence of cues with personal emotional significance.

<p>Buhlmann et al. (2014)^{j, k}</p> <p>Germany</p>	<p>To evaluate facial and object discrimination in people with BDD, a dermatological condition and non-clinical controls.</p>	<p>Experimental: Facial and object discrimination paradigms</p>	<p>BDD: 35 (74.3% female, mean age 33.2)</p> <p>Dermatology: 35 (62.9% female, mean age 32.7)</p> <p>Non-clinical controls: 35 (60% female, mean age 30.0)</p> <p>Severity of BDD was measured using the BDD-YBOCS (mean = 29.9)</p>	<p>No support for notion that people with BDD have an enhanced facial and object discrimination ability. They found a response bias for detecting changes in unchanged faces.</p>
<p>Buhlmann et al. (2011)^f</p> <p>Germany</p>	<p>To evaluate implicit associations about the importance of attractiveness in people with BDD, dermatological conditions and non-clinical controls.</p>	<p>Experimental: Go/No-Go Association Task (Nosek & Banaji, 2001)</p> <p>Explicit measures: German versions of the Beck Depression Inventory (Hautzinger, Bailer, Worall, & Keller, 1995) and Beliefs About Appearance Scale (Kikul, Gerbershagen, Buhlmann, & Rief, 2005)</p>	<p>BDD: 36 (66.6% female, mean age 33.4)</p> <p>Dermatology: 36 (63.9% female, mean age 32.3)</p> <p>Non-clinical: 36 (58.3% female, mean age 30.5)</p> <p>Severity of BDD was measured using the BDD-YBOCS (mean = 29.2)</p>	<p>Appearance concerns among persons with an actual dermatological condition are less severe than the concerns of people with BDD.</p> <p>They found a group difference on the implicit measure evaluating associations between 'attractive' and 'important'.</p>

<p>Buhlmann, Teachman, et al. (2008)^f</p> <p>Germany</p>	<p>To evaluate implicit and explicit self-esteem and beliefs about the importance of attractiveness in individuals with diagnosed BDD, subclinical BDD and non-clinical controls.</p>	<p>Experimental: Implicit associations task</p> <p>Explicit measures:</p> <p>German versions of the Rosenberg Self-Esteem Scale (Ferring & Philipp, 1996), Beck Depression Inventory (Hautzinger et al., 1995) and Beliefs About Appearance Scale (Kikul et al., 2005)</p>	<p>BDD: 15 (80% female, mean age 24.8)</p> <p>Subclinical BDD: 20 (85% female, mean age 23.6)</p> <p>non-clinical controls: 20 (80% female, mean age 23.8)</p> <p>BDD diagnosed using the Structured Clinical Interview for DSM-IV (SCID).</p>	<p>BDD participants had lower implicit self-esteem than non-clinical controls with the subclinical group in between. No difference on the implicit importance of attractiveness.</p>
<p>Buhlmann et al. (2009)^{a, d, f}</p> <p>Germany</p>	<p>To investigate implicit associations in self-esteem and attractiveness in people with BDD, subclinical BDD and non-clinical controls and see if this relates to symptom severity, distress and avoidance.</p>	<p>Experimental design</p> <p>Implicit Associations Task</p> <p>A novel mirror exposure task.</p>	<p>BDD: 21 (95% female, mean age 28.2)</p> <p>Subclinical BDD: 21 (86% female, mean age 28.2)</p> <p>Non-clinical Controls: 21 (86% female, mean age 27.5)</p> <p>Severity of BDD was measured using the BDD-YBOCS (mean for BDD group = 21; mean for subclinical group = 9.3)</p>	<p>BDD participants had lower implicit self-esteem than controls.</p> <p>BDD participants did not display any differences in implicit attractiveness-importance beliefs when compared to other groups however did display a difference in attractiveness-competence beliefs. These, and the self-esteem beliefs, were significant predictors of distress and mirror avoidance.</p>
<p>Clerkin and Teachman (2008)^k</p>	<p>To examine the association between physical and cognitive biases and BDD symptoms.</p>	<p>Experimental design.</p>	<p>70 undergraduate students (45.8% female) split into those with high and low BDD symptoms.</p>	<p>No difference in group ability to select their own face from the morphed versions. Partial support for high BDD symptoms being</p>

USA		<p>A modified interpretations questionnaire (Buhlmann, Wilhelm, et al., 2002)</p> <p>A facial Morphing Task (Epley & Whitchurch, 2008)</p>	<p>Severity of BDD symptoms was measured using the BDD-YBOCS (high symptom group mean = 15.5, low symptom group mean = 9.7)</p>	<p>related to a lack of self-enhancement bias.</p>
<p>Clerkin and Teachman (2009)^{a, d, f}</p> <p>USA</p>	<p>To measure the relationship between cognitive biases and correlates of mirror gazing.</p>	<p>Experimental design.</p> <p>The interpretations questionnaire (Buhlmann, Wilhelm, et al., 2002)</p> <p>Implicit Associations Task (Greenwald et al., 1998)-categories attractive vs plain, important vs meaningless.</p> <p>Mirror questionnaire (Veale riley 2001), behavioural measure of avoidance and self-reported anxiety and desire to avoid.</p>	<p>63 undergraduate students (67% female) split into those with high and low BDD symptoms.</p> <p>Severity of BDD symptoms was measured using the BDD-YBOCS (high symptom group mean = 18.9, low symptom group mean = 10.9)</p>	<p>Predictors of mirror gazing and related behaviours support cognitive models of BDD and suggest a difference between automatic and strategic measures.</p>
<p>Cooper and Osman (2007)^{e, j}</p> <p>UK</p>	<p>To investigate how people with BDD evaluate their thinking.</p>	<p>Cross-sectional interview-based design.</p>	<p>BDD: 18 (50% female, mean age 27.5).</p> <p>Severity of BDD was measured using the BDD-YBOCS (mean = 34.1).</p>	<p>People reported distraction from distressing images, which increased self-consciousness and decreased self-confidence. People reported negative self-judgements and looked in mirrors to confirm these.</p>

Feusner et al. (2010) ⁱ USA	To investigate the face-inversion effect in BDD.	Experimental design using faces presented for either long or short durations.	BDD: 18 (55.6% female, mean age 28.6) Non-clinical controls: 17 (58.8% female, mean age 28.1) Severity of BDD was measured using the BDD-YBOCS (mean = 28.9)	The inversion effect for response time was smaller in BDD participants during the long duration only.
Greenberg et al. (2014) ^{a, d, h} USA	To examine visual attention in individuals with BDD.	Cross-sectional group comparison design using eye tracking software to examine participants' gaze at their own and others' faces.	BDD: 19 (63% female, mean age 28.6) Non-clinical controls: 20 (70% female, mean age 33.3) Severity of BDD was measured using the BDD-YBOCS (mean = 29.7)	BDD participated selectively attended to their most unattractive feature and the corresponding feature on the other person's face. As age increased focus shifted from least to most attractive feature. Females looked most toward their unattractive feature however males looked most toward their attractive feature.
(Grochowski et al., 2012) ^{a, d, h} Germany	To examine whether individuals with BDD showed increased visual attention to flaws in their own and unfamiliar faces.	Experimental eye tracking design using self and other photographs.	BDD: 20 (60% female, mean age 31.1) Social Phobia: 20 (70% female, mean age 27.7) Non-clinical controls: 20 (60% female, mean age 31.2)	BDD participants attended more frequently to the areas of concern in their own face and corresponding areas of other faces. They described wide variability in responses and possibly two groups of BDD – those who look briefly, frequently and those who look longer less frequently.

			Severity of BDD was measured using the BDD-YBOCS (mean = 28.3)	
Kollei and Martin (2014) ^{a, c, d, e} Germany	To assess body-related cognitions in BDD.	Cross-sectional questionnaire and interview, quasi-experimental task where participants were asked to verbalise their thoughts in front of a mirror.	BDD: 30 (73.3% female, mean age 28.4) Depression: 30 (66.7% female, mean age 30.6) Non-clinical controls: 30 (70% female, mean age 27.0) Severity of BDD was measured using the BDD-YBOCS (mean = 27.5)	BDD participants verbalised more frequent and more negative body-related cognitions. They also reported higher levels of post-event processing, sadness and anger after the task. People with BDD and depression looked away from the mirror more often than controls.
Kollei et al. (2012) ^{a, b, d} Germany	To investigate intensity of emotions and frequency of thought control strategies in BDD.	Cross-sectional design group comparison. Differential emotions scale Control of intrusive thoughts questionnaire	BDD: 31 (61.3% female, mean age 28.8) Anorexia: 32 (93.8%, mean age 26.9) Bulimia: 34 (97.1% female, mean age 25.9) Non-clinical controls: 33 (69.7% female, mean age 26.9)	BDD participants experience more negative emotions (grief, anger, disgust, contempt, anxiety and shame) and more frequently use maladaptive thought control strategies (worrying, giving way to impulse and confrontation) than non-clinical controls. BDD and eating disorder groups were similar.

			Severity of BDD was measured using the BDD-YBOCS (mean = 31.1)	
Lambrou et al. (2011) ^j UK	To investigate aesthetic sensitivity to determine whether people with BDD's view of their appearance is due to a perceptual or evaluative disturbance.	Experimental design. Presented computer images of faces (participant and other) and buildings with varying degrees of symmetry and asked to select their actual, ideal, perfect (among other areas) image.	BDD: 50 (64% female, mean age 27.2) Art and design non-clinical controls: 50 (68% female, mean age 26.2) Non-art controls: 50 (64% female, mean age 26.3) Severity of BDD was measured using the BDD-YBOCS (mean = 29.6)	BDD participants displayed negative emotional and evaluative processing of their self-image. There was evidence of an absence of a self-serving bias.
Lambrou et al. (2012) ^{a, b, d, e} UK	To investigate differences in demographic characteristics and appearance concerns in people with and without BDD.	Cross-sectional, group comparison questionnaire design. Physical Appearance Worries Scale (a novel questionnaire)	BDD: 50 (64% female, mean age 27.2) Art and design non-clinical controls: 50 (68% female, mean age 26.2) Non-art controls: 50 (64% female, mean age 26.3) Severity of BDD was measured using the BDD-YBOCS (mean =29.6)	BDD participants tended to use negative, emotive and morally based descriptions of their defects, and these perceived defects caused significant interference in their lives.

Monzani et al. (2013) ⁱ UK	To investigate holistic and detailed visual processing in people with BDD.	Experimental design. Facial inversion task (Yovel & Kanwisher, 2004), composite task (Le Grand, Mondloch, Maurer, & Brent, 2004), Navon task (Navon, 1977).	BDD: 25 (56% female, mean age 29.4) Non-clinical controls: 25 (64% female, mean age 30.4) Severity of BDD was measured using the BDD-YBOCS (mean = 32.7)	Both groups performed similarly in all aspects of holistic processing.
Mulkens and Jansen (2009) ^{b, d} Netherlands	To investigate mirror gazing and self-focused attention in an analogue sample.	Experimental design. Mirror exposure and related visual analogue scales.	University students: 50 (100% female, mean age 20.9). BDD symptoms was measured using the My Looks Questionnaire (Bouman 1999) (high symptom group mean = 51.9, low symptom group mean = 34.5)	Highly body satisfied women evaluated their own face more positively after mirror exposure, low satisfied lowered scores and rated other face as more positive after exposure.
Mundy and Sadusky (2014) ⁱ Australia	To investigate visual bias in people at risk of developing BDD.	Experimental design. Inverted stimulus discrimination task.	High body image concern: 40 (90% female, mean age 22.9) Low body image concern: 40 (90% female, mean age 23.4) Body satisfaction measured using the Dysmorphic Concern Questionnaire (Oosthuizen, Lambert & Castle, 1998) (high group mean = 17.1, low group mean = 2.8)	High BIC group discriminated inverted faces and bodies faster than controls, and were more accurate when discriminating inverted bodies and scenes. This implies local, detail-focused processing bias.

Neziroglu et al. (2010) ^{b, d}	To examine disgust in BDD.	Cross-sectional group comparison design. Mirror gazing task and physiological measures (heart rate and skin temperature) Disgust rating scale (Haidt, McCauley, & Rozin, 1994)	BDD: 6 (17% female, mean age 25.1) Non-clinical control: 6 or 8 – misreported; unclear demographics. BDD diagnosed with the SCID-I.	The study claims that the BDD had higher baseline disgust reactivity and showed significant decreases in disgust over the trials. See main body of text for critique.
USA				
Onden-Lim and Grisham (2012) ^{a, d}	To explore image suppression in a BDD analogue group.	Experimental design. Visualisation task.	Non-clinical undergraduates: 92 (72.8% female, mean age 19.9) BDD symptoms measured using the BDD diagnostic module for adults and Body Image Concern Inventory.	Contrary to predictions suppression of appearance-related imagery reduces intrusion frequency, duration and discomfort in the short term.
Australia				
Onden-Lim et al. (2012) ^h	To investigate dysmorphic concern and attention to others' faces.	Experimental design. Dot probe paradigm.	One hundred female undergraduate students (mean age 19.8) Dysmorphic concern measured with the body image concern inventory (Littleton et al 2005). Scores were not reported.	A small correlation between dysmorphic concern and attention to attractive images and faces. Difference in presentation times suggest that attentional bias may not be an automatic however possibly a more conscious bias.
Australia				
Osman et al. (2004) ⁱ	To investigate imagery in BDD.	Cross-sectional, group comparison semi-structured interview design.	BDD: 18 (50% female, mean age 27.5) Non-clinical controls: 18 (50% female, 26.8).	BDD group's images were more negative, recurrent, vivid and detailed. They were viewed from an observer perspective and involved visual and organic sensations. They were linked to early stressful memories.
UK				

			Severity of BDD was measured using the BDD-YBOCS (mean = 34.1)	
Phillips et al. (2011) ^g Australia	To examine the relationship between self-concept and BDD symptoms.	Cross-sectional questionnaire design. self-ambivalence measure, Contingencies of self-worth scale, other general measures of mental health.	Non-clinical controls: 194 (76.3% females, mean age 24.7). Severity of BDD symptoms was measured using the BDD-YBOCS (mean = 11.03).	Contingent self-worth based on appearance was a significant predictor of BDD.
Reese et al. (2010) ^{i, k} USA	To investigate aestheticity in people with BDD.	Experimental design. Facial symmetry detection.	BDD: 20 (70% female, mean age 30.1) OCD: 20 (50% female, mean age 34.8) Non-clinical controls: 20 (35% female) Severity of BDD was measured using the BDD-YBOCS (mean = 20.3)	The BDD group were not significantly better at detecting differences in facial symmetry than the other groups.

Stangier et al. (2008) ^j Germany	To examine facial discrimination in BDD.	Experimental design where participants were asked to discriminate between slightly different faces.	BDD: 21 (mean age 35.2, gender not reported) Disfigured controls: 19 (mean age 39.3) Non-disfigured controls: 20 (mean age 34). Severity of BDD was measured using the BDD-YBOCS (mean = 20.3)	BDD were significantly more accurate than both controls groups.
Thomas and Goldberg (1995) ^k UK	To investigate people with BDD's actual and perceived appearance in comparison to people awaiting rhinoplasty and non-clinical controls.	Quasi-experimental design. Appearance was rated by a professional morphanalyst and lay people. Body image (face) distortion measurement task was used.	BDD: 20 (40% female, mean age 32.3) Surgical: 20 (50% female, mean age 27.7) Non-clinical control: 20 (40% female, mean age 30.3) BDD was not formally measured.	The BDD group were more likely to have subtle appearance differences from the general population however their concerns did not map with the areas of difference. BDD participants were likely to underestimate their face size in certain conditions however not all.
Veale and Riley (2001) ^{a, b, d, h} UK	To develop a better understanding of mirror gazing and hypotheses generation.	Cross-sectional, group comparison design. Novel 'Mirror Gazing Questionnaire'	BDD: 52 (59.6% female, mean age 30.1) Non-clinical control: 55 (52% female, mean age 33.4)	Four distinct types of selective avoidance. Prior to gazing people with BDD experience strong hopes and desires about what they will see. They felt worse after gazing however spent significantly longer mirror gazing than controls. They

			Method of BDD diagnosis checking not reported.	displayed more focus on feelings or impressions than controls, more attention on specific parts of their body than the whole, more distress before, during and after.
Veale et al. (2003) ^g UK	To examine the beliefs about appearance in people with BDD.	Cross sectional comparative group questionnaire design. Selves questionnaire (Higgins, Bond, Klein, & Strauman, 1986)	BDD concerned with body or face: 72 (67% female, mean age 33.2) BDD concerned with weight or size: 35 (81% female, mean age 34.6) Non-clinical controls: 42 (80% female, mean age 29.5) BDD was diagnosed by the first author in routine clinical practice.	BDD patients (overall) displayed significant discrepancies between their self-actual and self-ideal/self-should ratings.
Windheim et al. (2011) ^{a, b, d, h} UK	To see whether 1) exposure to mirrors increases distress and 2) longer gazing leads to greater distress. Also, to see whether mirror gazing 3) increases selective attention to facial features, 4) decreases certainty	Experimental mirror gazing. Novel 'Mirror Gazing: Cognition and Affect Rating Scale'.	BDD: 25 (48% female, median age 27) non-clinical control: 25 (48% female, median age 28) Severity of BDD was measured using the BDD-YBOCS (average = 29)	Both BDD and controls experienced an increase in distress and self-focused attention. Only people without BDD experienced an increase in distress when exposed to a mirror for a long period.

	about appearance and 5) increases urges to either continue or avoid looking.			
Yaryura-Tobias et al. (2002) ^{j, k} USA	To see whether people with OCD, BDD or non-clinical controls differ in their perception of their faces.	Cross-sectional group comparison. Novel face-recognition and distortion task.	BDD: 10 (40% female, mean age 31) OCD: 10 (40% female, mean age 36) Non-clinical controls: 10 (70% female, mean age 36). Severity of BDD was measured using the BDD-YBOCS however the results were not reported.	People with BDD and OCD manipulated images of their own face, implying that they recognise their own face differently to how others recognise it.

Maintenance factors which the papers investigated are indicated by superscript letters.

Avoidance = a, Rituals = b, Rumination = c, Safety-seeking behaviours = d, Negative appraisal of body image = e, Exaggerated appraisal of body image = f, Comparison with ideal = g, Selective attention = h, Over-focus on details = i, Processing self as an aesthetic object = j, Misinterpretation of visual information = k.

*The BDD modification of the Yale-Brown Obsessive Compulsion Scale (BDD-YBOCS; Phillips et al. (1997)) is a widely used, well validated measure of BDD symptoms.

Appendix C: Criteria for service improvement project group selection

Examples of factors which may influence patients state of adjustment. This impression is based on meetings during the acute hospital event or telephone contact following discharge.

These are some of the features that may be present.

Adjusted	Poorly adjusted
<ol style="list-style-type: none"> 1. Good understanding of condition. Receptive to advice, reads literature and uses resources provided Resourceful and seeks own information 2. Acknowledges limitations, making an effort to adjust to physical limitations. Demonstrates some signs of acknowledgment that life may be different 3. Able to set goals and adjust pace in realistic manner. Receptive to advice. 4. Realistic expectations of the health care system 5. Level of concern/ anxiety within context of stage of illness. 6. Experience of the health care system has been positive and appropriate 7. Has good social & emotional support. Condition unlikely to impact on work, social or financial aspects of life. 8. Resourceful 9. Condition may be at more stable trajectory 	<ol style="list-style-type: none"> 1. Poor comprehension Lacks motivation or interest (may be associated with overwhelming fatigue) In denial Unaccepting or shocked by diagnosis Not receptive to advice 2. Struggling with physical limitations, unable to comprehend changes, maybe inappropriately driven. 3. Unrealistic physical expectations may push self beyond appropriate level. 4. May have experienced unexpected health complications, near death experience, or witnessed distress or death of another patient 5. May be young and never had previous health problem 6. Difficulty navigating the health care system. May have experienced complication of the health care system / process 7. Lacking in social or emotional support. Feeling isolated 8. Not engaging with health care professionals. Does not take responsibility for self 9. Physically very unwell, overwhelming fatigue may cause lack of engagement and motivation 10. Living with a long term chronic condition or life threatening condition and uncertainty. Multiple health problems

Appendix D: Interview schedule for service improvement project.

I'm going to ask you some questions about your experience of heart failure and the services provided by the Royal United Hospitals Bath. We know from research that having a diagnosis of heart failure can affect people emotionally as well as physically so I'm particularly going to ask about how having heart failure has affected you emotionally. By this I mean things like your mood, anxiety, confidence, self-esteem and other things like that. Before I begin, can I check you understand what I mean when I use the term 'anxiety'? Is there a word that you would prefer to use (i.e. worry, panic, turns, nerves etc.)? I'll try to use your word rather than mine throughout the questions.

1. I just want to ask a few details first. Can I begin by asking whether you know your New York Heart Association Functioning Classification? This is a score of 1-4 usually given to you by your doctor.
2. How many admissions to hospital for heart failure have you had in total? How long have these lasted on average?
3. I'd like you to tell me about your experience of receiving a heart failure diagnosis from the RUH including how you coped with this.
4. Did you receive any support around the time of diagnosis and could anything have been done differently to prepare you for a diagnosis or made receiving the diagnosis easier?
5. When you received the diagnosis what did you expect living with heart failure to be like?
6. Now that you have a diagnosis of heart failure, how do you think this might affect you in the long term and what do you think can be done about it?
7. More generally, have you been offered or received support from the healthcare team at the RUH? What kind of support was this? (e.g. information support, practical support, talking support)?
 - a. [possible prompts] Were you given opportunities to ask questions and talk about any worries?
 - b. Were you given any information about what emotional and social issues are common in people with heart failure?
 - c. Have you received any information about how to manage emotional and social issues common in people with heart failure?
 - d. Did you receive any preparation for how to live a full and rewarding life with heart failure? [include prompt about exercise if not mentioned]
 - e. [if no to above or little information given] Do you think receiving any of this would have been useful?
8. Do you think any other support would have been useful or may be useful in the future? Specifically what kind of support would you like to receive? [could be

things like appointment times or locations being flexible/more convenient, having opportunity to speak to other people with heart failure, having opportunity to speak about worries during appointments, social support]

- a. [if they give suggestions] When would you have liked to receive this support? (i.e. at diagnosis, prior to surgery or major interventions/beginning medication / recovery periods etc.)

9. Do you think that having a diagnosis of heart failure has affected you emotionally and if so please could you tell me about this?
- a. [possible prompts] Do you feel like your mood or anxiety has changed since the onset of your heart failure? In what way has it changed?
- b. Do you have any worries about having heart failure? Can you tell me a bit about what worries you have?

10. On a scale of zero to ten, with zero being no concern and ten being very concerned, on average, before the onset of your heart failure, how would you rate your...

...mood?

No concern 0 1 2 3 4 5 6 7 8 9 10
Very concerned

...anxiety? (or their word)

No concern 0 1 2 3 4 5 6 7 8 9 10
Very concerned

...overall quality of life?

No concern 0 1 2 3 4 5 6 7 8 9 10
Very concerned

...social functioning?

No concern 0 1 2 3 4 5 6 7 8 9 10
Very concerned

Using the same scale, at the worst you've been since the onset of your heart failure, how would you rate your...

...mood? [and when was this point?]

No concern 0 1 2 3 4 5 6 7 8 9 10
Very concerned

...anxiety? (or their word) [and when was this point?]

No concern 0 1 2 3 4 5 6 7 8 9 10
Very concerned

...overall quality of life? [and when was this point?]

No concern 0 1 2 3 4 5 6 7 8 9 10
Very concerned

...social functioning? [and when was this point?]

No concern 0 1 2 3 4 5 6 7 8 9 10
Very concerned

Using the same scale, at present, how would you rate your...

...mood?

No concern 0 1 2 3 4 5 6 7 8 9 10
Very concerned

...anxiety?

No concern 0 1 2 3 4 5 6 7 8 9 10
Very concerned

...overall quality of life?

No concern 0 1 2 3 4 5 6 7 8 9 10
Very concerned

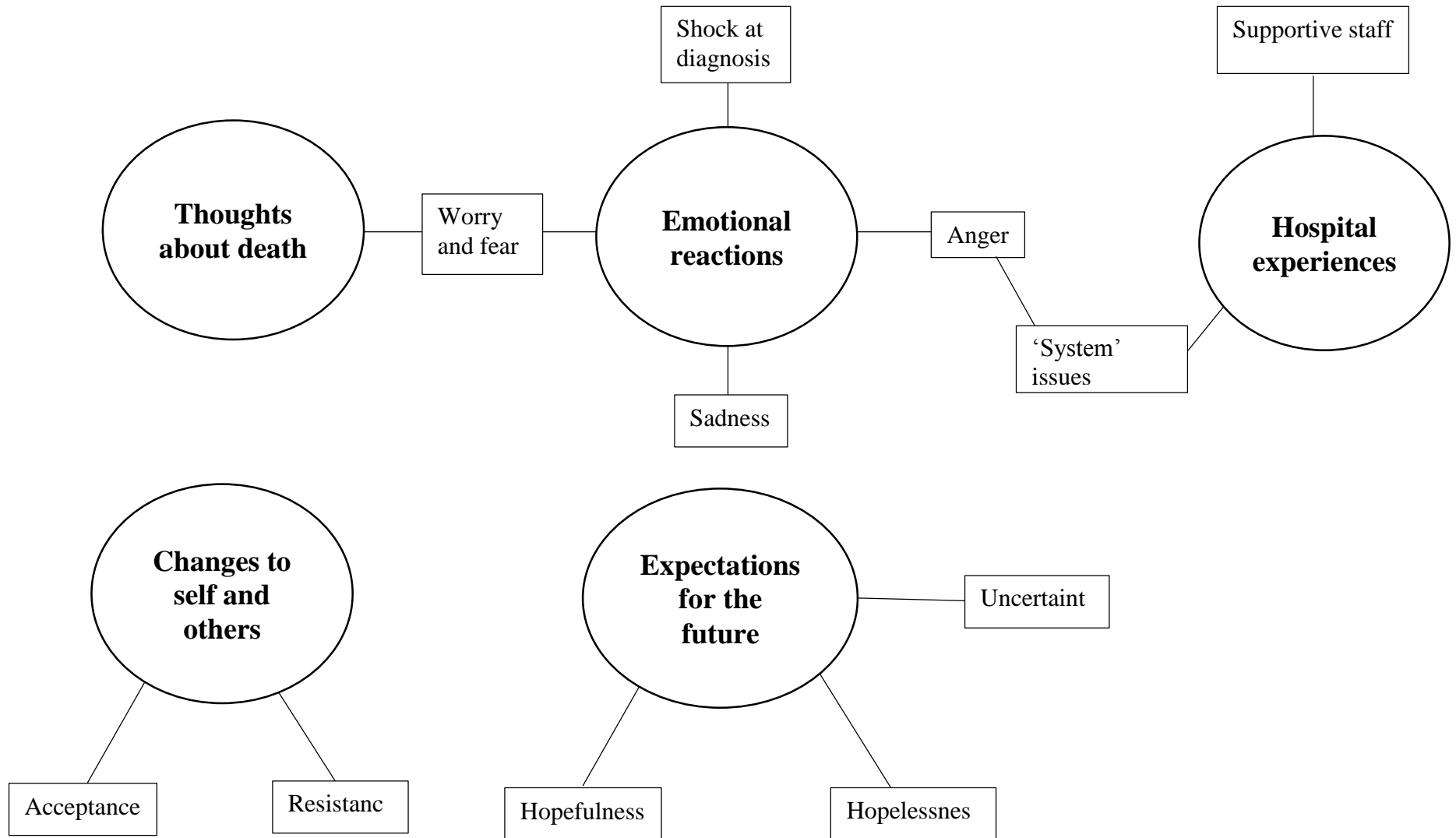
...social functioning?

No concern 0 1 2 3 4 5 6 7 8 9 10
Very concerned

9. Administer PHQ9 and GAD7

That is the end of my questions. Thank you for your time and for helping develop the service at the RUH.

Appendix E: A thematic map for the service improvement project.



Appendix F: Research and Development approval for the service improvement project.

Royal United Hospitals Bath 
NHS Foundation Trust

Research and Development
Wolfson Centre
Royal United Hospitals Bath
Combe Park
Bath
BA1 3NG

Date: 12 February 2016

Tel: 01225 824160
Email: Kelly.spencer@nhs.net

Gerwyn Mahoney-Davies,
Trainee Clinical Psychologist
School of Psychology
University of Bath

Dear Miss Mahoney-Davies,

Ref: SE0017

Project: A qualitative evaluation of the emotional and psychological experience of people with congestive heart failure under the care of the Royal United Hospitals Bath.

Your project methodology has been reviewed and I can confirm that this study should not be classed as research and can be conducted as a service evaluation. Given this, you are not required to seek an NHS Research Ethics Committee opinion or gain R&D Management approval.

I would like to take this opportunity to wish you luck with the project. Please keep R&D informed of the outcome of this interesting piece of work.

Yours sincerely



Dr Kelly Spencer
R&D Manager

Appendix G: Socialisation Interview schedule

Introduction

[Say participant number, date and project ID onto recorder]

Thank you for helping us out with this project. First of all we need to go over the information sheet and check if you have any questions about today. I will then ask you some questions and to do a quick task. This will take about 30-40 minutes. If you would like to we will finish with a fun activity!

(Consent – 5 mins)

Interview (15-20 mins)

I will start by asking you some questions about therapy, or something we would call ‘cognitive behaviour therapy’ or ‘CBT’. What do you like to call it? This part will take about 15-20 minutes. I have five main questions we are asking everyone who takes part but I will ask other questions if I need to clarify anything.

You can stop taking part at any time and don’t have to answer every question. Because it can be difficult to say ‘no’ to answering a question, I will give you this card to hold up if you don’t want to answer a question, or to ask for the question to be asked in another way. Do you have any questions before we start?

Socialisation interview schedule

- 1) Tell me about your experience of having CBT. [general qualitative Q]
 - a. Could you tell us a few good things and a few bad things about therapy? (YP can choose whether to start with good or bad). (Prompt if only good or bad mentioned). [possible prompt question, probably wouldn’t directly result in any socialisation type answers if asked later]

- 2) Did you learn any skills in CBT? Can you tell about these skills? What skills were they? [explicit understanding, concordance]
 - a. After you finished therapy did you keep using any skills? Which skills did you keep using?[evidence of applying principles congruent with the model]

- 3) Did you find anything useful about your therapy? What did you find useful? [explicit understanding of the model e.g. learn about avoidance, bad things weren’t going to happen, people didn’t hate me etc.]

- 4) Were you asked to do things between sessions? What did you have to do? [evidence of applying principles congruent with the model]

- 5) Compared to when you were first seen for CBT, would you say things are:
 - 1) Very much improved
 - 2) Much improved

- 3) Minimally improved
- 4) No change
- 5) Minimally worse
- 6) Much worse
- 7) Very much worse

6) Would you like to add anything else?

Vignette (5 mins)

Next I am going to give you a short task to do. There is a short story to read and four questions to answer. Would you like to read this story or would you prefer for me to read it to you? I can stay here or I can give you a few minutes alone to complete it if you would prefer.

Debrief and activity (5 mins)

(Give debrief sheet)

Appendix H: The CBT Skills task

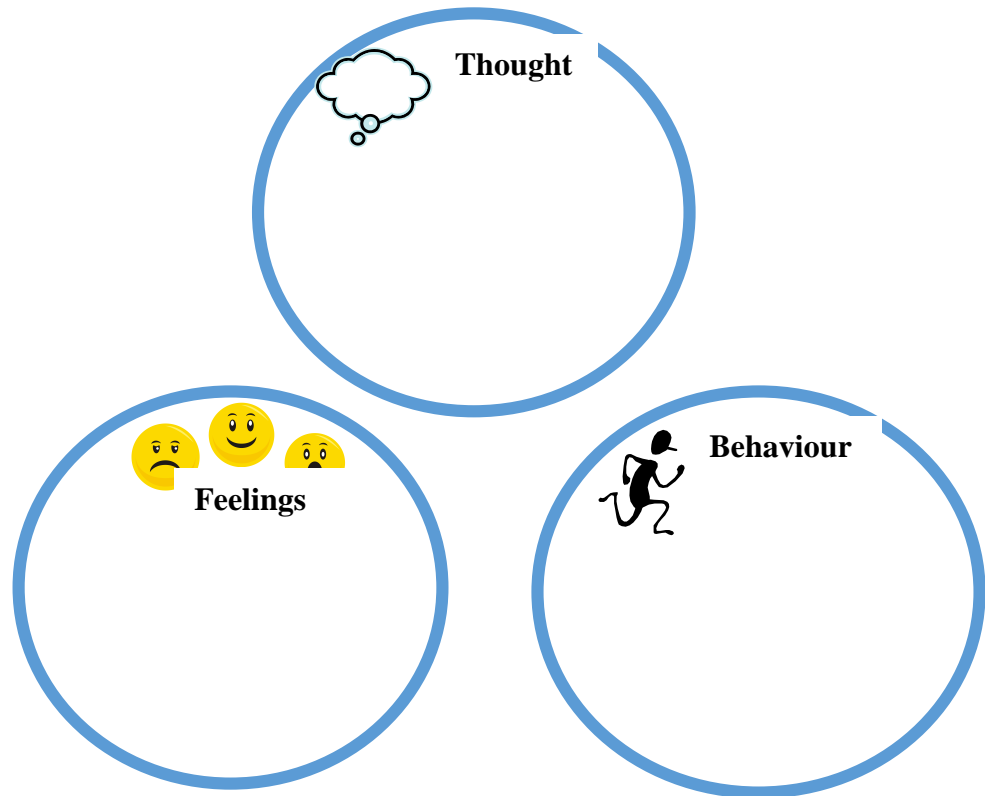
Thoughts, feelings and behaviours story

Alex worries a lot. He worries that something really bad might happen to people close to him. If he has does not have something to worry about he'll worry that he has missed something important and will try to find it. He jumps to the worst possible conclusions and his body constantly feels tense. His thoughts go through his mind quickly and one worry will often lead to another. He has trouble sleeping and can't get his mind to stop.

Thoughts, feelings and behaviours task

Please read the short story about Alex and answer the four questions below. There are no right or wrong answers.

1. What thoughts, feelings, and behaviours might Alex have? Please write these in the circles below.



2. Draw arrows to show how the circles above could be connected

3. What needs to change for Alex to get better?

4. Design an activity to help with Alex's worry and tell us why it might help him

Appendix I: Socialisation interview scoring criteria

Socialisation Interview scoring criteria

The coding categories:

1. **Explicit understanding**
2. **Concordance**
3. **Active planning**
4. **Evidence of applying the principles**
5. **Language**
6. **(psychoeducation)**

Socialization to the Treatment Model

Extract utterances related to the young person's understanding, description or discussion of CBT. Enough of the utterance must be extracted to ensure that extract can be coded, i.e. Relevant context.

Both body sensations aspects and emotional/mental aspects (e.g. anxiety, negative thoughts) are relevant to extract, particularly any utterances directly pertaining to CBT.

Each utterance will be coded and will be scored 1 for each category it relates to (i.e. each utterance could potentially score a total of 5, although this is unlikely). A total score will be derived for the overall number of utterances and the total in each category. If no utterances are linked to the area this will be scored as a 0. It is therefore possible for a category score to be 0 if the participant does not make utterances relevant to this category. The total number of utterances will vary in each interview, meaning that there is no upper total limit to scores.

Coded:	Absent	(0)
	Present	(1)

Utterances made by the young person

1) **EXPLICIT UNDERSTANDING:** Utterances indicating an understanding of CBT principles including thoughts, feelings and behaviours. See language table for possible utterances. E.g.:

- a) I talked about the way my thoughts were related to how I felt
- b) The therapist helped me to notice things I felt in my body
- c) I learned that avoiding things was keeping my anxiety going

2) **CONCORDANCE:** Simple statements in active agreement/concordance with the CBT model e.g. any utterance where you can reasonably identify that there is active agreement from the patient with the therapist suggestions. E.g.:

- a) I did some scary things that my therapist told me might help because I thought it might make me feel better (or idea related to reasons behind it/agreement)
- b) When my therapist said....that really made sense to me because...
- c) We (therapist and young person) worked together.....
- d) That was really good...

3) **ACTIVE PLANNING:** Active agreement of plan to proceed and implement behavioural change or intervention. When considering rating questions as active planning, consider the context as to whether this is true active planning.

This may be activity planning/plans to alter behavioural patterns, with therapist (e.g. in sessions) or autonomously (e.g. homework). E.g.:

- a) I tried/tested out/practiced....at home

Active planning may also take the form of agreement of a suggested plan. E.g.:

- b) My therapist asked me to do... for homework.

4) **EVIDENCE OF APPLYING THE PRINCIPLES:** Predominantly after therapy, continued use of CBT skills they learned and anything above and beyond what was planned during sessions and what was asked by the therapist. E.g.:

- a) 6 months later still using...
- b) Therapist asked me to do....and I also did....because (reason why related to CBT)

5) **LANGUAGE:** Use of key psychological language employed that is specific to the CBT model. The language used must be in the context of discussing presenting difficulties, intervention or relating to the CBT model in some way. Consider whether the young person would have used this term/word prior to engaging in CBT, and whether a peer would use this term. If not, consider coding. Language can be coded several times in any utterances, although duplicates can only be coded once per interview. *Note: language used will be age dependent and CBT terminology is often simplified into everyday language for younger people.*

Language scoring:

Thoughts	(Negative automatic) thoughts	Thought challenging/challenge thoughts	Detective thinking
	Thinking bias	Thinking traps	Red/green thoughts
	Reframing	Balanced thoughts	Catching pesky thoughts (in a net)
	Evidence in a court case	Mind reading	Jumping to conclusions
	Blowing things up	Builders wall/apprentice	Weighing the evidence
Feelings	Emotions	(feeling words e.g. anxious, sad, upset, worried)	Sit the anxiety out
Behaviours	Doing differently	Avoidance/avoid things	(reassurance seeking – anything referring to this e.g. asking mum if things were ok)
	Exposure/response/ERP	Checking	
Physical sensations	Body reactions	Fight/flight (caveman etc.)	
Connecting TFB	Cycle (e.g. of anxiety)	Spiral	Vicious cycle

Other	Good and bad coach	Coping strategies/how to cope	Relaxation
	Mindfulness (e.g. noticing thoughts/letting them go)	Taking a breath/diaphragmatic breathing	STOP
	Timeline	Homework	Worry/thought diary
	Recording worries/thoughts	Being aware of thoughts/feelings	Scale of (anxiety/worry...)
	Overcome (anxiety/worry...)	Blueprint	

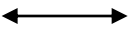
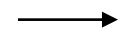
Coding:		Explicit Understanding	Concordance	Active planning	Applying principles	Language	(Psychoed)	TOTAL
Utt. No.	Time	Utterance						
1								
Coding								
2								
Coding								
3								
Coding								
4								
Coding								
5								
Coding								
6								
Coding								
7								
Coding								
8								
Coding								
9								
Coding								
10								
Coding								
11								
Coding								
12								
Coding								
13								
Coding								
14								
Coding								

Appendix J: CBT Skills task scoring

1. **Score 1 point for each thought, feeling and behaviour within its relevant bubble** (e.g. thoughts in the thought bubble) up to a maximum of three per bubble. These can be thoughts, feelings and behaviours quoted from the story or relevant hypothetical responses. Physical sensations (e.g. heart beating fast, body tense) can only be scored in the feelings bubble. Worry can be scored as a feeling or a behaviour. Score range 0-9 (*explicit understanding*)
2. **Score each arrow with a direction** (e.g. three sets of double ended arrows = score of 6, three sets of single ended arrows = score of 3, two single ended arrows (i.e. connecting thoughts-feelings and feelings-behaviour = score of 2)). Score range 0-6 (*explicit understanding*)
3. Score range 0-2 (*applying principles*) –
 - a. **Score 2** for an answer that describes a **change in** thoughts, feelings or behaviours (e.g. *'realise his thoughts are not facts', 'reducing catastrophic thoughts/beliefs', 'change unhelpful behaviours', 'stop jumping to the worst possible conclusion', 'being more aware of how his body is feeling'*). Answers that describe what needs to change are not scored here, but can be scored as part of question 4 if applicable.
 - b. **Score 1** for an answer that mentions thoughts, feelings or behaviours, but does not say what needs to change (e.g. *'psychoeducation', 'learn about thoughts/worry', 'control his worry'*)
 - c. **Score 0** for an answer that suggests something completely unrelated to changing TFB, or which suggests a change in TFB but one which is not helpful or informed by CBT principles (e.g. *'Alex should text the people close to him every day to check they are ok', 'see a therapist'*)
4. Score for each activity relevant to the model (*active planning*) – score range 0-3
 - a. **Score 3** for an answer if the activity designed and reason why it might help him both fit with the CBT framework (e.g. *'this will help challenge his thoughts and look at things from a different perspective'* - i.e. one aspect influencing the other)
 - b. **Score 2** for an answer that designs an activity and a reason for why it might help, but does not directly link TFB (e.g. *'this will help him because he will be able to notice when he's thinking a certain way and how he feels when he is thinking like this'*)
 - c. **Score 1** point for an answer that designs an activity, but does not give a reason why this might help (e.g. *'keep a thought diary'*)

- d. **Score 0** for a suggestion of activity unrelated to the CBT framework, or **no suggestion made at all** (e.g. ‘Ask his mum what to do when he gets upset’)

Max score 20

Question		0	1	2	3	Total (max score)
1) TFB	Thoughts					(3)
	Feelings					(3)
	Behaviours					(3)
2) Number of each arrow						(6)
						
3) Change						(2)
4) Activity						(3)
TOTAL						(20)

Appendix K: Letter to clinicians requesting data

[Clinician Address]

[Date]

Dear clinician,

Re: [Client's name and DOB]

The above person has kindly taken part in research investigating socialisation to the CBT model conducted by the University of Bath (approved by South-East Scotland Research Ethics Committee, reference 15-SS-0131).

They have agreed for us to contact you and a copy of their consent form is included. We have included an information sheet about the research and why we are contacting you.

In order for us to complete the research we require some further information about the young person's treatment. Included are two brief questions that we would like you to answer and return to us in the stamped addressed envelope (or via email to g.mahoney-davies@nhs.net). It should take no longer than a few minutes to complete the questions.

Also, if you have access to their total RCADS and SDQ scores pre and post treatment and their Session Rating Scale score from, or around, session 3 please record these on the included rating form. If you do not have access to these scores the research team will collect copies of the questionnaires when they are at the team base or through the outcome data coordinator for your service.

Thank you for your help with this research project.

Yours sincerely,

Gerwyn Mahoney-Davies and Cara Roberts-Collins
Clinical Psychologists in Training

Participant ID: _____

Please initial the box

Appendix L: Young person information sheet

CBT Research Invitation

We are inviting young people aged 11-18 to take part in a research project about Cognitive Behavioural Therapy. Please read the information below and decide if you want to take part. The research is being run by Gerwyn Mahoney-Davies and Cara Roberts-Collins from the University of Bath.



What we are researching

Lots of young people have difficulties such as feeling low or anxious. They are often treated using something called 'Cognitive Behavioural Therapy' (CBT). We would like to understand more about what young people learn from CBT.



What will happen if I take part?

You will be asked to speak to Gerwyn or Cara about your experience of CBT.

We will need to audio record what you say so that we can listen back to it.

This will be deleted at the end of the study. You will also be asked to complete a short task. This may take around half an hour in total. We are interested in how you found the process of receiving CBT rather than why you were referred to therapy. You don't have to tell us personal things and you can skip questions you do not want to answer. None of your personal information will be told to anyone else.

Your CBT therapist will also be asked to tell us about how well they think you understand CBT and asked to provide copies of some of the questionnaires you completed during CBT. We won't ask them any personal information about you and we won't tell them what you say about your experience of CBT.

You will be given a letter which explains what the study is about to give to your GP if you wish.



Risk and Benefits

We don't think there are any risks to taking part in this project although it may bring up thoughts and feelings from your treatment. There is support in place in case you get upset. We hope that the information you give us could help other people who have CBT in the future. You will also be given a £5 high street voucher to thank you for taking part.

The things you tell us will be private and confidential. You will be identified by a number rather than your name. If you tell us anything that concerns us we will need to follow this up.



Do I have to take part?

No. It is your choice whether you take part. There are no problems with not taking part. If you decide to take part and then change your mind that is fine.

You can withdraw at any time.

What we find out from the study will be put into a report. Your name or any other information that might identify you will not go into this report.

How to take part

If you would like to take part we can come to your home or see you at the University of Bath, whichever you would prefer.

If you would like to take part please contact Gerwyn or Cara by email on gmd30@bath.ac.uk or crc33@bath.ac.uk or telephone 07478 942153.

If you would like to talk to an independent person about this research please contact PALs@oxfordhealth.nhs.uk or 0800 328 7971.

Thank you for taking the time to read this information sheet

Appendix M: Parent information sheet

Young people's understanding of CBT.

Parent information

Your son/daughter has been invited to take part in a research project looking at their understanding of Cognitive Behaviour Therapy (CBT). They have been invited because they have had CBT in the past.

Please read this information carefully to help decide if you are happy for their involvement.

We want to find out about young people's experience of receiving CBT. There have been lots of research studies showing good outcomes for young people receiving CBT but little that has asked them specifically how they found the experience. We would like to ask your son/daughter questions about what they learned from CBT and how they found the process. We will need to audio record the conversation so that we can listen back to this after the interview. We will also ask them to complete a written task which requires them to apply their knowledge of CBT. Their CBT therapist will also be asked to complete a questionnaire asking how much they think your son/daughter benefited from CBT. As part of this research we also want to see whether a better experience of CBT led to better outcomes, so we will also ask the therapist to provide copies of the questionnaires that your son/daughter completed during therapy.

Do I have to take part?

No. If you do agree to take part then we will ask your son/daughter to speak to us about their experience of CBT and to complete a short questionnaire. This should take no longer than half an hour. You can be present at this interview subject to consent from your son/daughter. Your son/daughter will be given the contact details of Cara Roberts-Collins or Gerwyn Mahoney-Davies, who are Clinical Psychologists in Training who will be available to offer appropriate support if they become upset.

Confidentiality

Confidentiality will be maintained – the name of your son/daughter will not be on the questionnaires. They will be given an identification number and no names or identifiable details will be written in the report. If risk issues are disclosed during the interview, this will be followed up by the researcher, and the debrief sheet will contain further resources the young person can access.

How will information be stored?

The questionnaires will be kept securely and electronic information will be kept on a password protected computer. Identifiable information like names and addresses will not be kept electronically. These will be kept securely in a locked cabinet at the University of Bath and treated as highly confidential material. Audio recordings made during the interview will be deleted after the study has finished.

What will happen with the findings?

The findings will be written into a report which will form part of Doctorate in Clinical Psychology research. This report will also be submitted for publication in a journal so may be available to a large amount of people. The write up will be confidential and your son/daughter will not be identifiable.

What if something goes wrong?

If you have any concerns or wish to complain about any aspect of the way you have been approached or treated as part of this study, you should initially contact the researchers, Cara Roberts-Collins or Gerwyn Mahoney-Davies, who will do their best to address your concerns. Their contact details are provided at the end of this information sheet. If you remain unhappy and wish to complain formally, you can do this by contacting, the University of Bath Secretary Mark Humphriss on 01225 286212 or universitysec@bath.ac.uk. The University of Bath, as Sponsor of the study, has indemnity (insurance) arrangements in place. Every care will be taken to ensure your child's safety during the course of this study.

For more information please contact the researchers:

Cara Roberts-Collins
Clinical Psychologist in Training
Department of Psychology
University of Bath
Email: crc33@bath.ac.uk
Phone: **07478942153**

Gerwyn Mahoney-Davies
Clinical Psychologist in Training
Department of Psychology
University of Bath
Email: gmd30@bath.ac.uk
Phone: **07478942153**

Supervised by Dr Ailsa Russell, Clinical Director (A.J.Russell@bath.ac.uk) and Dr Maria Loades, Clinical Tutor (M.E.Loades@bath.ac.uk) University of Bath, Department of Clinical Psychology

If you would like to talk to an independent person regarding the study, please contact Oxford Health NHS Foundation Trust Patient Advice & Liaison Service (PALS) Email: PALS@oxfordhealth.nhs.uk, Freephone 0800 328 7971

Thank you for taking the time to read this information sheet

Appendix N: Clinician information sheet

Understanding young people's socialisation to CBT

Clinician information

Gerwyn Mahoney-Davies and Cara Roberts-Collins are Clinical Psychologists in training on the Doctorate course at the University of Bath. We would like to ask for your help to recruit participants for our main research project.

Project aims

The project aims to understand how young people experience therapy, and in particular, socialise to the model of Cognitive Behaviour Therapy (CBT). The evidence suggests that CBT works well as a treatment for young people, however no studies have looked at socialisation to the model.

How can I help?

We would like to ask you and your colleagues to give out or post information sheets about our study to young people that could be eligible to participate. These young people can then get in touch with us if they are interested in taking part.

If the young person gives consent to do so, we will also be asking you as their therapist how much you think the young person benefitted from CBT. We want to find out whether a better experience of CBT led to better outcomes, so we will also ask you to provide copies of outcome measures (e.g. RCADS and SRS) completed by the young person during therapy. We would contact you about this via post.

Who can take part?

The inclusion criteria are:

- Aged **11-18 years old**
- Have **completed CBT** within the last 6 months
- We are recruiting young people both **with** and **without** a diagnosis of an **Autism Spectrum Disorder (ASD)**
- Fluency in written/spoken English language
- No documented or suspected intellectual disability

We are also inviting young people with a diagnosis of ASD who **have not** attended CBT to complete a short Emotional Awareness Questionnaire (EAQ30).

We are **excluding** young people who have a known intellectual disability, are currently an inpatient, or for whom you would consider contact from the service would have an adverse effect on their mental health.

What will participants be asked to do?

Participants will be asked to attend a short (15-20 minute) interview asking about their experience of CBT, and to complete a short task. The young people with ASD will be asked to complete an additional questionnaire about their emotional awareness. These can be completed either at the CAMHS clinic or at the young person's home. They will receive a £5 voucher for their participation.

Confidentiality and Data Protection

All information that you provide will be kept **completely confidential and anonymised**.

WHAT NOW...?

For more information, please contact:

Cara Roberts-Collins
Clinical Psychologist in Training
Department of Psychology
University of Bath

Email: crc33@bath.ac.uk
Tel: 07478942153

Gerwyn Mahoney-Davies
Clinical Psychologist in Training
Department of Psychology
University of Bath

Email: gmd30@bath.ac.uk
Tel: 07478942153

Supervised by Dr Maria Loades, Clinical Tutor,
Dr Ailsa Russell, Clinical Director University of Bath

and

Thank you for taking the time to read this Information Sheet

This project has been reviewed and given favourable opinion by the South-East Scotland Research Ethics Committee (reference number 15-SS-0131.)

Appendix O: NHS ethical approval for main research project

Lothian NHS Board South East Scotland

**Research
Ethics Committee 02**



Waverley Gate
2-4 Waterloo Place
Edinburgh
EH1 3EG
Telephone 0131 536 9000

www.nhslothian.scot.nhs.uk

Date 14 August 2015

Your Ref Our Ref

Enquiries to: Joyce Clearie Extension: 35674 Direct Line: 0131 465 5674 Email:
Joyce.Clearie@nhslothian.scot.nhs.uk

14 August 2015

Mr Gerwyn Mahoney-Davies
60 Jasmine Way
Trowbridge
Wiltshire
BA14 7SW

Dear Mr Mahoney-Davies

Study title: Young people's understanding of CBT: Socialisation to the model and its relationship with clinical outcomes.

REC reference: 15/SS/0131

IRAS project ID: 174208

Thank you for your letter of 7th August 2015, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this favourable opinion letter. The expectation is that this information will be published for all studies that receive an ethical opinion but should you wish to provide a substitute contact point, wish to make a request to defer, or require further information,

please contact the REC Manager, Ms Joyce Clearie, joyce.clearie@nhslothian.scot.nhs.uk. Under very limited circumstances (e.g. for student research which has received an unfavourable opinion), it may be possible to grant an exemption to the publication of the study.

Confirmation of ethical opinion



**Healthy
Working
Lives**

Headquarters
Waverley Gate, 2-4 Waterloo Place, Edinburgh EH1 3EG
Chair Mr Brian Houston
Chief Executive Tim Davison

Lothian NHS Board is the common name of Lothian Health Board

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database. This should be before the first participant is recruited but no later than 6 weeks after recruitment of the first participant.

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non-clinical trials this is not currently mandatory.

If a sponsor wishes to request a deferral for study registration within the required timeframe, they should contact hra.studyregistration@nhs.net. The expectation is that all clinical trials will be registered, however, in exceptional circumstances non registration may be permissible with prior agreement from NRES. Guidance on where to register is provided on the HRA website.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS sites

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Copies of advertisement materials for research participants [Poster]	1	24/4/2015
Covering letter on headed paper [Response to REC re: provisional opinion]		7/8/2015
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [public indemnity insurance]		2014-2015
Interview schedules or topic guides for participants [Interview script]	1	10/4/2015
IRAS Checklist XML [Checklist_09072015]		09 July 2015
Letter from sponsor [Sponsorship]	1	07 July 2015
Non-validated questionnaire [Thoughts-Feelings-Behaviour vignette]	1	27 March 2015
Other [Letter to clinicians for data]	1	24 April 2015
Other [Confirmation / appt letter]	1	10 April 2015
Other [Telephone screening script]	1	24 April 2015
Other [Letter to service managers]	1	07 May 2015
Other [University Insurance]		
Other [Young Person debrief]	1	10 April 2015
Other [Parent debrief]	1	10 April 2015

Other [Letter to clinicians for data]	2	06 August 2015
Other [Letter to GP]	1	06 August 2015
Other [Protocol v2]	2	06 August 2015
Participant consent form [YP Consent form]	3	06 August 2015
Participant consent form [Parent consent form]	3	06 August 2015
Participant consent form [YP Assent form (<16)]	3	06 August 2015
Participant information sheet (PIS) [Clinician Information Sheet (re-submitted for convenience)]	2	03 June 2015
Participant information sheet (PIS) [Parent information sheet]	3	06 August 2015
Participant information sheet (PIS) [YP information sheet]	3	06 August 2015
REC Application Form [REC_Form_09072015]		09 July 2015
Referee's report or other scientific critique report [Academic report]	1	17 June 2015
Summary CV for Chief Investigator (CI) [Gerwyn CV]	1	17 May 2015
Summary CV for supervisor (student research) [Maria CV]		March 2015
Validated questionnaire [RCADS]		
Validated questionnaire [Session Rating Scale]		
Validated questionnaire Child session Rating scale		

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.

After ethical review

Reporting requirements

The attached document “*After ethical review – guidance for researchers*” gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use

the feedback form available on the HRA website: <http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/>

HRA Training

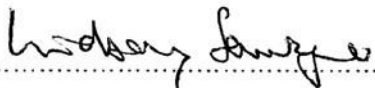
We are pleased to welcome researchers and R&D staff at our training days – see details at <http://www.hra.nhs.uk/hra-training/>

15/SS/0131

Please quote this number on all correspondence

With the Committee's best wishes for the success of this project.

Yours sincerely



.....

Professor Lindsay Sawyer

Chair

Email: joyce.clearie@nhslothian.scot.nhs.uk

Enclosures: “After ethical review – guidance for researchers” [\[SL-AR2\]](#)

Copy to: Prof Jane Millar

Ms Jana Safarikova, Oxford Health NHS Foundation Trust

Appendix P: Author Guidelines – Body Image

Types of Papers

The journal publishes original research articles, brief research reports, theoretical and review papers, and science-based practitioner reports of interest. The journal also gives an annual award for the best doctoral dissertation in this field.

Brief Research Reports. These should not exceed 2,500 words (excluding abstract, references, tables, figures and appendices). Up to a total of two one-page tables, figures, and/or appendices are permitted. The number of references cannot exceed 25.

While regular-length papers have no explicit limits in terms of numbers of words, tables/figures, and references, authors are encouraged to keep their length below 35 total pages. A paper's length must be justified by its empirical strength and the significance of its contribution to the literature.

Article structure

Introduction

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

Material and methods

Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

Results

Results should be clear and concise, describing the findings and their associated statistical basis. Consider the use of tables and figures for statistical details.

Discussion

This section should present the theoretical, empirical, and applied implications of the results, not simply repeat the findings. The study's limitations should be explicitly recognized. A combined Results and Discussion section may be appropriate.

Conclusions

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

Appendices

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Essential title page information

- **Title.** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
- **Author names and affiliations.** Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after

the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.

- ***Corresponding author.*** Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. **Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.**

- ***Present/permanent address.*** If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Abstract

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

The abstract should be a maximum of 150 words.

Appendix Q: Author Guidelines – Journal of Clinical Nursing

Journal of clinical nursing

1.1 Essential Criteria

The Editors welcome papers that develop and promote knowledge that is directly relevant to all spheres of clinical practice in nursing around the world. Therefore, papers must demonstrate clinical application and international relevance, and make an important and novel contribution to the field. The Editors are also looking for papers which will be widely read and cited, thereby having an impact on nursing knowledge and practice. Manuscripts undergo an initial review by the Editor-in-Chief and the Editors before peer review, to assess whether they meet these essential criteria. There is no process of appeal against rejection at this stage

1.3 International Relevance

Papers submitted should be relevant to the Aims & Scope of *JCN* and written in a way that makes the relevance of content clear for *JCN*'s international readership. For a discussion of what international relevance means and what makes a paper internationally relevant, please see Watson et al.'s editorial on ['What makes a *JCN* paper international?'](#)

Before submitting your paper, please ensure that:

- A reader in a region or country very different from your own will be able to make sense of everything in your paper;
- You have clearly outlined the relevance of your paper to the subject field internationally and also its transferability into other care settings, cultures or nursing specialities;
- Papers exploring focussed cultural or other specific issues have clearly placed the discussions within an international context;
- When you are discussing clinical issues, you have made the relevance to other geographical regions and cultural contexts clear.

Specific requirements to ensure the paper is clearly relevant to an international audience are as follows:

- Country names are only to be included in titles where it is made clear the content is being compared and contrasted to the International arena.
- Ensure that cited sources are available in English.
- Relevant international literature should be cited, so that studies are embedded in the context of global knowledge on the topic.
- Explain any policies, practices and terms that are specific to a particular country or region.

6. MANUSCRIPT TYPES ACCEPTED

Please note that quotations are included in the overall word count of articles.

Original Articles: should be less than 8,000 words long, double spaced with a wide margin (at least 2cm) on each side of the text. The main text should be structured as follows: Introduction (putting the paper in context - policy, practice or research);

Background (literature); Methods (design, data collection and analysis); Results; Discussion; Conclusion; Relevance to clinical practice. The number of words used, excluding abstract, references, tables and figures, should be specified. Pilot studies are not suitable for publication as original articles. We also ask that authors limit their references to 50 in total and all references must be available in English.

7.1 Structure

All manuscripts submitted to *JCN* should include a covering letter stating on behalf of all the authors that the work has not been published and is not being considered for publication elsewhere. If the study that is being submitted is similar in any way to another study previously submitted/published or is part of multiple studies on the same topic, a brief sentence explaining how the manuscript differs and that there is no identical material should be stated in the cover letter upon submission.

No identifying details of the authors or their institutions must appear in the manuscript; author details must only appear on the title page and will be entered separately as part of the online submission process.

Title Page: (needed for all manuscript types) must contain both a descriptive and concise title of the paper; names and qualifications of all authors; affiliations and full mailing address, including e-mail addresses, contact telephone number (and Twitter username if you would like this published). The title page must also contain details of the source(s) of support in the form of grants, equipment, drugs or all of the above.

Structured Abstract: (needed for all manuscript types) should not exceed 300 words and should accurately reflect the content of the paper. The abstract should not include references or abbreviations and should be provided under the headings: Aims and objectives; Background (stating what is already known about this topic); Design; Methods (for both qualitative and quantitative studies state *n*); Results (do not report *p* values, confidence intervals and other statistical parameters); Conclusions (stating what this study adds to the topic); Relevance to clinical practice; Keywords. Please note that you are asked to add your abstract and keywords into a box when submitting your paper, but both abstract and set of keywords should also appear at the beginning of your actual manuscript (main document) file.

Summary box: (needed for all manuscript types) should contain 2-3 bullet points under the heading 'What does this paper contribute to the wider global clinical community?'

Keywords: (needed for all manuscript types) the keywords that need to be entered within your manuscript (up to 10), are words associated with the paper, which will allow it to be easily cited after acceptance. These are different from the keywords chosen from a list during the submission process; these keywords are to assist the Editors in searching for reviewers to review the manuscript.

Headings and Sub Headings: (needed for all manuscript types): please present headings in the manuscript in bold capitals, sub-headings in lower-case and bold, and subsequent headings in italics.

Appendix R: Author Guidelines – Behavioural and Cognitive Psychotherapy

Behavioural and Cognitive Psychotherapy is an international multidisciplinary journal for the publication of original research of an experimental or clinical nature, which contribute to the theory, practice and evaluation of behaviour therapy. As such, the scope of the journal is very broad and articles relevant to most areas of human behaviour and human experience which would be of interest to members of the helping and teaching professions will be considered for publication.

As an applied science the concepts, methodology and techniques of behavioural psychotherapy continue to change. The journal seeks both to reflect and to influence those changes.

While the emphasis is placed on empirical research, articles concerned with important theoretical and methodological issues as well as evaluative reviews of the behavioural literature are also published. In addition, given the emphasis of behaviour therapy on the experimental investigation of the single case, the journal from time to time publishes case studies using single case experimental designs. For the majority of designs this should include a baseline period with repeated measures; in all instances the nature of the quantitative data and the intervention must be clearly specified. Other types of case report can be submitted for the Brief Clinical Reports section.

The following types of articles are suitable for Behavioural and Cognitive Psychotherapy:

- Reports of original research employing experimental or correlational methods and using within or between subject designs.
- Review or discussion articles that are based on empirical data and that have important new theoretical, conceptual or applied implications.
- Brief reports and systematic investigations in single case employing innovative techniques and/or approaches.

Articles should concern original material that is neither published nor under consideration for publication elsewhere, this also applies to articles published in languages other than English.

a. Title page. The title should phrase concisely the major issues. Author(s) to be given with departmental affiliations and addresses, grouped appropriately. A running head of no more than 40 characters should be indicated, plus 4 keywords.

b. Abstract. The abstract should be structured under the headings: Background, Aims, Method, Results, Conclusions. It should include up to six key words that could be used to describe the article. This should summarize the article in no more than 250 words.

c. Text. This should begin with an introduction, succinctly introducing the point of the paper to those interested in the general area of the journal. The appropriate positions of

tables and figures should be indicated in the text. Footnotes should be avoided where possible.

d. Reference note(s). A list of all cited unpublished or limited circulation material, numbered in order of appearance in the text, giving as much information as possible about extant manuscripts.

e. References. These should follow APA guidelines. References within the text should be given in the form of Jones and Smith (1973) or (Jones and Smith, 1973). When there are three or up to and including five authors the first citation should include all authors; subsequent citations should be given as Williams et al. (1973). Authors with the same surname should be distinguished by their initials. All citations in the text should be listed in strict alphabetical order according to surnames. Multiple references to the same author (s) should be listed chronologically, using a, b, etc., for entries within the same year. Formats for journal articles, books and chapters should follow these examples:

- Kaltenthaler, E., Parry, G. and Beverley, C. (2004). Computerised cognitive behaviour therapy: a systematic review. *Behavioural and Cognitive Psychotherapy*, 32, 31–55. doi:10.1017/S135246580400102X.

- Tharp, R.G. and Wetzel, R.J. (1969). *Behaviour Modification in the natural environment*, New York: Academic Press.

- Roskies, E. and Lazarus, R.S. (1980). Coping theory and the teaching of coping skills. In P.O. Davidson and S.M. Davidson (Eds), *Behavioural medicine: changing health lifestyles*. New York: Brunner/Mazel.

f. Footnotes. The first, and preferably only, footnote will appear at the foot of the first page of each article, and subsequently may acknowledge previous unpublished presentation (e.g. dissertation, meeting paper), financial support, scholarly or technical assistance, or a change in affiliation. A concluding (or only) paragraph must be the name and full mailing address of the author to whom reprint requests or other enquires should be sent.

Manuscripts should not usually include more than five tables and/or figures. Tables and Figures should appear at the end of the main text and references, but have their intended position within the paper clearly indicated in the manuscript. They should be constructed so as to be intelligible without reference to the text. Tints and shading may be used, but colour should be avoided unless essential. Although colour is possible in the online version, when designing a Figure please ensure that any line variation/distinction demonstrated by colour can still be noted when in black and white so as to be decipherable in the printed issue. Tables should be numbered and given explanatory titles. Numbered figure captions should be provided. Please see the Cambridge University Press Artwork guidelines [here](#) for more details on creating artwork.

h. Required Sections

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Conflict of interests: Please provide details of all known financial, professional and personal relationships with the potential to bias the work. Where no known conflicts of interest exist, please include the following statement: *“(Authors names) have no conflict of interest with respect to this publication.”*

Financial Support: Please provide details of the sources of financial support for all authors, including grant numbers. For example, *“This work was supported by the Medical research Council (grant number XXXXXXXX)”*. Multiple grant numbers should be separated by a comma and space, and where research was funded by more than one agency the different agencies should be separated by a semi-colon, with *“and”* before the final funder. Grants held by different authors should be identified as belonging to individual authors by the authors’ initials. For example, *“This work was supported by the Wellcome Trust (A.B., grant numbers XXXX, YYYY), (C.D., grant number ZZZZ); the Natural Environment Research Council (E.F., grant number FFFF); and the National Institutes of Health (A.B., grant number GGGG), (E.F., grant number HHHH)”*. Where no specific funding has been provided for research, please provide the following statement: *“This research received no specific grant from any funding agency, commercial or not-for-profit sectors.”*