

Training health visitors in perinatal Obsessive Compulsive Disorder:  
does it help mothers?

Katrina Rumball

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## **ABSTRACT**

Intrusions specifically related to a mother's infant and an increase in prevalence of Obsessive Compulsive Disorder (OCD) has both been observed in the perinatal period. Such intrusions have been observed to be a source of distress in some mothers. However, as compared to postnatal depression, the literature has demonstrated a lack of research and training of health professionals in perinatal OCD (pOCD). Health visitors provide a clear role in checking mothers' wellbeing postnatally and present an opportunity for research and training. The present study aimed to provide health visitors with an understanding of intrusions and the cognitive-behavioural model of OCD, equipping them with skills in identification and normalising. The key aim was then to examine the effects of the training on mothers. Health visitors attended a ninety-minute training session in pOCD and intrusions. Mothers who saw these health visitors were compared to mothers who saw health visitors who had not received this training, forming an experimental group and a control group respectively. Postal questionnaires found significantly lower results in the experimental group for how bothered mothers were by the intrusions they experienced. The questionnaire did not detect the mechanism for this lower result in the experimental group (i.e. whether health visitors were normalising intrusions for the experimental group). There was no significant difference between groups in time spent completing compulsions or in symptoms of depression, anxiety and stress. Pre and post-training health visitor data found increased consideration of pOCD as a diagnosis. A critical review of the study is discussed. Further research is suggested to explore impact of training on mothers with clinical level pOCD and to examine the effects of the provision of normalising in itself.

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## INTRODUCTION

Early parenthood is associated with an increased risk of the development or exacerbation of obsessional problems, including Obsessive Compulsive Disorder (OCD; Abramowitz et al., 2010; Buttolph & Hollander, 1990; Zambaldi et al. 2009). This is consistent with the Cognitive-Behavioural model of OCD (Salkovskis, 1985; 1999), which would link raised prevalence to the increase in perceived responsibility, a central component of the model. Perinatal OCD (pOCD) is OCD that occurs during the perinatal period. Research has shown that women in the non-clinical population, i.e. who do not have a clinical level of OCD during the perinatal period, also experience an increase in distress around intrusive thoughts or images (Fairbrother & Abramowitz, 2007) although reported prevalence rates vary. Evidence has been found for the provision of Cognitive Behavioural Therapy (CBT) for women with pOCD.

Health visitors are trained nurses or midwives with specialist training in family and community health. Their role involves detecting early issues, which may develop into problems or risks for the family if not addressed, for example a child health issue or a parent struggling to cope (Department of Health, 2011). It is often health visitors who identify mental health symptoms in the postnatal period. However, lack of training in pOCD means symptoms are often not picked up or are wrongly interpreted, sometimes leading to catastrophic consequences, such as babies being removed from mothers due to an incorrectly perceived risk (Challacombe & Wroe, 2013).

This study used a controlled trial to evaluate the effectiveness of a short teaching

intervention for health visitors to improve knowledge, skills and confidence in detecting and responding to pOCD symptoms. The occurrence of obsessive-compulsive symptoms and symptoms of depression, anxiety and stress was compared between mothers who had been seen by health visitors who were trained in pOCD compared to a control group (mothers who are seen by health visitors who had not received this training).

This chapter will begin with an overview of pOCD including prevalence and impact on overall wellbeing. Consequences of misdiagnosis or the diagnosis being undetected are presented. A brief overview of the cognitive behavioural model and psychological treatment is provided and the application of ‘normalising’ unpleasant intrusions is discussed as a potential basic skill for health visitors. Assessment of risk is also outlined, considered a valuable and inevitable discussion point within any health professional training. Current provision of training in pOCD and economic reports are also discussed. Finally the clinical aims of the study and the hypotheses are stated.

### **What is Obsessive Compulsive Disorder?**

Obsessive Compulsive Disorder (OCD) is characterised by obsessions and/or compulsions that are time-consuming or cause clinically significant distress or impairment in social, occupational, or other important areas of functioning (American Psychiatric Association, 2013). Obsessions can be defined as intrusive and unwanted recurrent and persistent thoughts, urges, or impulses, causing marked anxiety or distress in most individuals. The individual attempts to ignore, suppress or neutralise them with

some other thought or action (a compulsion). Compulsions are repetitive behaviours or mental acts that the individual feels driven to perform in response to an obsession or according to rules that must be applied rigidly. These compulsions are aimed at preventing or reducing anxiety or distress, or preventing some dreaded event or situation.

OCD has a lifetime prevalence of approximately 2–3% in the general population (Karno, Golding, Sorenson & Burnam, 1988). Studies by Rachman and de Silva (1978) and Salkovskis and Harrison (1984) in non-clinical populations found about 90% of the sample reported experiencing intrusive cognitions, which were indistinguishable in content from that observed among individuals with OCD. These findings have since been replicated in several other studies (e.g. Brewin, Christodoulides, & Hutchinson, 1996; Freeston, Ladouceur, Thibodeau, & Gagnon, 1991; Purdon & Clark, 1993).

Common intrusions cited by Rachman and de Silva (1978) included fear about leaving an appliance on that may cause a fire, sudden fear of having left the door unlocked, an impulse to run the car off the road while driving, and fear of getting a sexually transmitted infection from touching a toilet seat. As illustrated in this study, content of intrusions typically involve fear of harm to self or others due to contamination, accidents, illness, violence or inappropriate sexual acts. Compulsions can be either overt behaviours (such as cleaning, checking the oven is off or holding one's breath) or covert mental acts (such as mentally counting, repeating certain phrases or prayer; Veale, Freeston, Krebs, Heyman & Salkovkis, 2009).

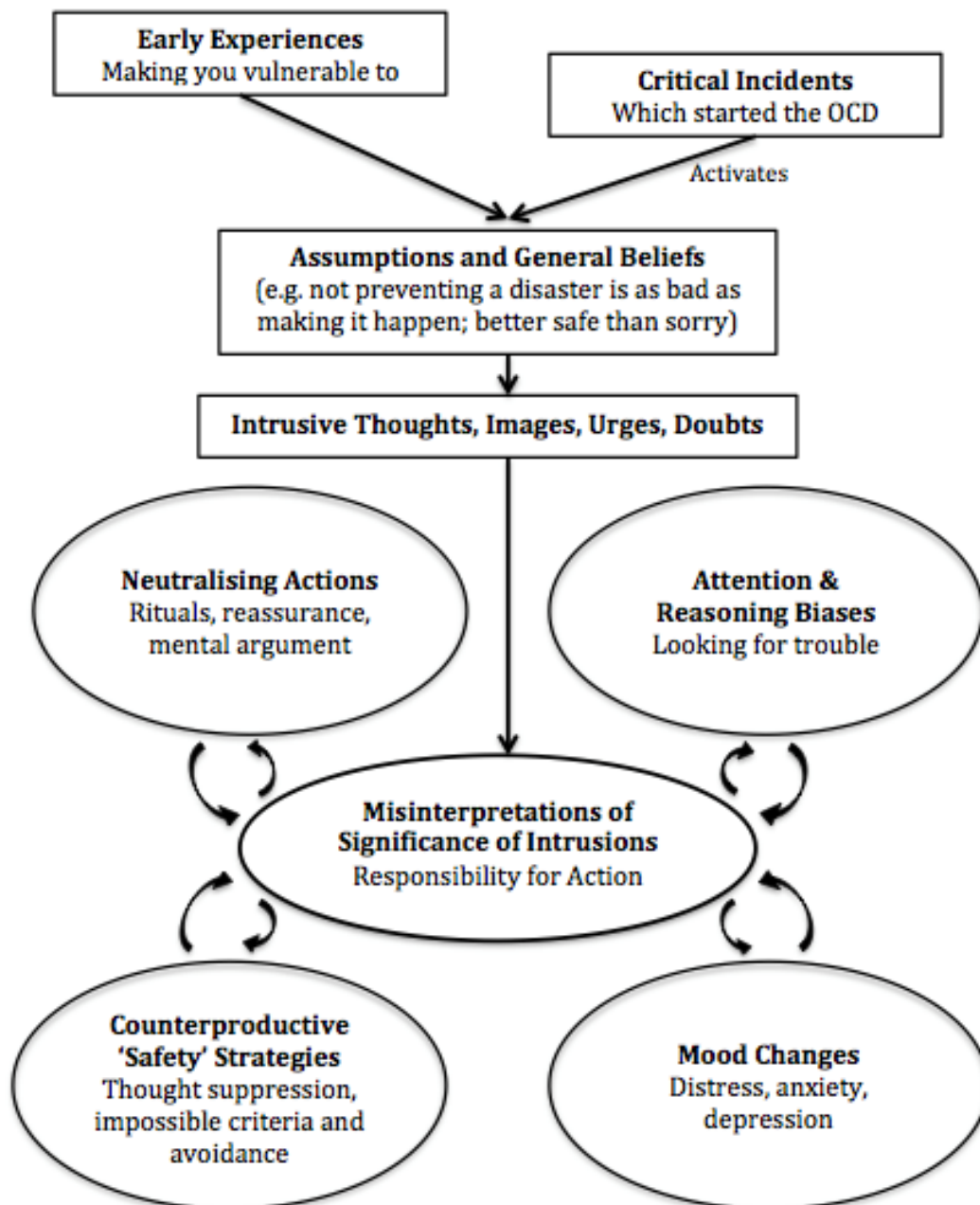
OCD has been found to have a substantial impact on quality of life, and has been associated with reduced self-esteem (Ehnholt, Salkovskis & Rimes, 1999), marital distress (Emmelkamp & Gerlsma, 1994), reduced social functioning (Koran, Thienemann, & Davenport, 1996), interference with religious expression (Antony, Roth, Swinson, Huta, & Devins, 1998), interference with leisure activities (Khanna, Rajendra, & Channabasavanna, 1988) and family dysfunction and distress (Calvocoressi et al., 1995). Recently, Norberg, Calamari, Cohen and Riemann (2008) found impairments on all 16 quality of life domains including self-esteem, relationships, learning and finances.

### **Cognitive Behavioural Model of OCD**

Not only has it been demonstrated that intrusions occur in at least 90% of the general population (Rachman & de Silva, 1978; Salkovskis & Harrison, 1984), these studies also showed that their content was indistinguishable between intrusions in the normal population and for those with obsessive problems. Salkovskis (1985) combined these observations with Beck's theory of emotional disorders (Beck, 1976). Beck's cognitive behavioural model is centred on the theory that emotional responses, such as anxiety, occur when stimuli or situations are interpreted in a negative fashion (Salkovskis, 1999). Salkovskis' model therefore draws on the fact that, despite the high prevalence of intrusions, very few people go on to develop OCD and it is therefore the interpretation of these intrusions that is key. Obsessional problems result from the maladaptive interpretations and thinking patterns related to their occurrence (Abramowitz, Schwartz, Moore, & Luenzmann, 2003b).

Salkovskis (1999) suggests individual interpretations regarding intrusions are made according to assumptions regarding responsibility and potential harm to oneself or others. If intrusions are interpreted as threatening and/or something that the individual could take personal responsibility for they can become problematic. These people feel motivated to engage in compulsive behaviours as an attempt to reduce the perceived threat of the intrusions based on their belief about responsibility for harm. Consequently the beliefs about potential harm and responsibility are maintained. The compulsions, including neutralising and avoidance behaviours, are reinforced as when they are completed not only do they temporarily reduce distress experienced prior to them, but they also prevent an individual from learning that a feared event will not occur. In turn an individual's sense of responsibility is further increased due to the perception that the behaviours have in fact prevented the feared event. A representation of the Cognitive-Behavioural Model of OCD (Salkovskis, 1999) is provided in Figure 1.0.





**Figure 1.0:** A representation of Salkovskis' (1999) cognitive behavioural model of OCD

### What is Perinatal OCD?

Perinatal OCD (or pOCD) refers to OCD during the perinatal period, i.e. during pregnancy or one year after birth. The impact of pOCD may last longer than the

perinatal period itself, and OCD may have occurred in previous episodes or been present antenatally. The content of intrusions often features potential harm to the baby, whilst compulsions work to protect the baby, for example by washing and checking. Notably, as with other mental health problems at this time, it not only has an impact on the mother but also, like in studies of maternal depression (Atkinson et al., 2000), has the potential to impact on mother-baby attachment and therefore the long-term wellbeing of the child.

Research suggests that the occurrence of unwanted intrusions about harm to the child is a common phenomenon (Abramowitz, Schwartz & Moore, 2003a). Although people experience a number of different intrusions, only a select few of these intrusions are experienced as highly disturbing (Purdon & Clark, 1993). The cognitive-behavioural model of OCD suggests that people with OCD attach exaggerated significance to unwanted, intrusive thoughts if they are appraised as meaningful and contradictory to important and valued aspects of the self (Rowa, Purdon, Summerfeldt & Anthony, 2005); logically a woman's role as a mother fits this concept. A recent review of the literature by McGuiness, Blissett and Jones (2011) argues that OCD in the postnatal period is a distinctive clinical picture with specific symptomatology and course. A distinctive clinical presentation of pOCD is consistent with cognitive behavioural models of OCD (Salkovskis, 1999), which suggest that most adults experience upsetting and ego-dystonic intrusive thoughts that reflect an individual's current attentions and concerns. In the case of perinatal OCD, the current attention and concern would be about safety to the baby.

Fairbrother and Abramowitz (2007) proposed that the perinatal period lowers the

threshold for OCD development or exacerbation due to the sudden increase in responsibility for a vulnerable and highly cherished infant. Parenthood may cause the misinterpretation of normal intrusive infant-related thoughts, due to overestimation of an apparent threat, and evoke a range of responses that function to reduce both perceived risk to the baby and distress to the parent (Fairbrother & Abramowitz, 2007). In addition, studies have found that complications during pregnancy and birth are risk factors for onset (Zambaldi et al., 2009). This can lead to misinterpretation of infant-related intrusive thoughts (in fact a very normal experience) and an over-estimation of threat. Consequential behaviour to this increase in intrusions is consistent with OCD, for example avoidance and reassurance seeking, which function to reduce obsessional distress as well as the perceived risk associated with the intrusive thought (Zambaldi et al., 2009).

The most commonly reported obsessional thoughts during this period are fears of intentionally or accidentally harming the fetus or child (Buttolph & Hollander, 1990; Sichel, Cohen, Rosenbaum & Driscoll, 1993; Arnold 1999; Maina, Albert, Bogetto, Vaschetto & Ravizza, 1999; Wisner, Peindl, Gigliotti & Hanusa, 1999). However in a study with a nonclinical sample of 400 postpartum women Zambaldi et al. (2009) found that aggressive-related obsessions were not the only common symptom. The study also provided rates for subjects who did or did not meet OCD diagnosis threshold separately. Rates of aggression obsessions and contamination obsessions were both high (aggressive with OCD 77.8%, without OCD 27.5%; contamination with 77.8%, without 31.9%). They also found prevalence of sexual obsessions (with 33.3%, without 1.9%), religious obsessions (with 41.7%, without 9.3%), obsessions with need for symmetry or exactness (with 44.4%, without 8.5%) and somatic obsessions (with 25.0%, without 10.2%). A

further miscellaneous section, the details of which were unfortunately not specified, also yielded high prevalence rates (with 72.2%, without 33.8%). Some examples of intrusions they cited include accidentally harming the baby due to chemicals on hands, thoughts about dropping the baby, putting him or her in a microwave oven, throwing boiling water over him or her, and the baby dying or having an accident. Uguz, Akman, Kaya and Cilli (2007) also assessed symptomology using the Yale-Brown Obsessive Compulsive Scale (Goodman, Price, Rasmussen, & Mazure, 1989a). They found that the most common obsessions with women with pOCD were in the categories of contamination (75%), aggression (33.3%), and symmetry/exactness (33.3%).

Abramowitz et al. (2003a) examined the content of intrusive thoughts of 53 mothers and 23 fathers of young infants. The highest rates of intrusions they found were for suffocation/Sudden Infant Death Syndrome (SIDS; mothers 44.4%, fathers 45.2%). Rates for accidents (mothers 26.7%, fathers 25.8%) and intentional harm (mothers 21.1%, fathers 22.6%) were relatively common. Lower prevalence rates were found for losing the baby (mothers 7.8%, fathers 3.2%), illness (mothers 3.3% fathers 0%), and sexual intrusions (mothers 2.2%, fathers 0%). Interestingly contamination intrusions had a low prevalence (mothers 0%, fathers 3.2%), compared to the findings of Zambaldi et al. (2009) and Uguz et al. (2007), and it is noteworthy that this study featured a small sample size. Another inconsistency in the research is a cross-sectional study by Wenzel, Gorman, O'Hara and Stuart (2001). In their study of 47 postnatal women with symptoms of both depression and OCD they found that the participants' thought content did not include infant harm. However the study did not use a tool that enquired specifically about thoughts of infant harm, meaning participants may not have felt comfortable disclosing these thoughts when not directly asked (Ross & McLean 2006).

Understandably it has been found that mothers are often reluctant to disclose the nature intrusions featuring harm to their baby until such thoughts were no longer being experienced (Jennings, Ross, Popper & Elmore, 1999; Newth & Rachman, 2001). This suggests that numbers are likely to be underestimated. Of clinical concern is that the concealment of such intrusions could work to maintain them and the related beliefs about their significance. If such intrusions remain 'unspeakable' they cannot be normalised or challenged (Newth & Rachman, 2001).

In terms of compulsions, Zambaldi et al. (2009) compared the rates of postpartum women with and without OCD and found the following compulsions were common: cleaning/washing (with OCD 72.2%, without OCD 17.6%), checking (with 69.4%, without 23.6%), repeating rituals (with 30.6%, without 8.0%), counting (with 16.7%, without 2.2%), and hoarding/collecting (with 16.7% without 2.7%). Similar prevalence rates were found by Uguz et al. (2007) who found that the most common compulsions with women with pOCD were cleaning/washing (66.7%) and checking (58.3%).

### **Prevalence: Pregnancy as a Precipitating Event or Exacerbation of Existing Symptoms**

The rate of clinically significant perinatal OCD varies widely in the literature (Speisman, Storch & Abramowitz, 2011). There are some clear reports of increases in onset postnatally, and evidence that pregnancy, childbirth or parenting are associated with an exacerbation of OCD symptoms for women that previously met a diagnosis of OCD.

For example, in a study by Bottolph and Hollander (1990), of those that responded to a postal survey, 69% indicated that onset or worsening of OCD symptoms was associated with pregnancy or birth of a child. However, the potential influence of a response bias for participants who felt more familiar with the concepts being more likely to opt into the study means the high prevalence rate found has been questioned (Abramowitz et al., 2003b). Increased life stress and hormonal changes may also play a role in the increased incidence of OCD at this time (Forray, Focseneanu, Pittman, McDougle, & Epperson, 2010). Interestingly pregnancy-related onset has also been reported in men (Abramowitz, Moore, Carmin, Wiegartz, & Purdon, 2001).

Zambaldi et al. (2009) interviewed 400 women 2-26 weeks after birth. According to their results, gathered using the Mini International Neuropsychiatric Interview, 9% of the sample met diagnostic criteria for OCD and 2.3% of the whole sample reported postnatal onset OCD. Wenzel, Haugen, Jackson and Brendle (2005) conducted a diagnostic interview and a battery of self-report inventories with 147 community recruited women approximately eight weeks following childbirth. They found a 2.7% (n=4) prevalence of OCD in the population, with three women (2.0%) reporting postnatal onset (implying 0.7% (n=1) of the population had pre-existing OCD, although it is not specified whether this woman felt her OCD was exacerbated by pregnancy, childbirth or parenthood). More recently Forray et al. (2010) conducted retrospective interviews with women attending a university-based OCD clinic who met Diagnostic and Statistical Manual of Mental Disorders fourth edition (DSM-IV) criteria for OCD according to the Structured Clinical Interview for DSM-IV Disorders (First, Spitzer, Gibbon & Williams, 1995). They found that 32.1% (n = 24) of women in the 'ever pregnant group', had OCD onset in the perinatal period, 15.4% in pregnancy, 14.1%

postnatally, and 1.3% following miscarriage.

Looking at triggering life events, childbirth has been found to link to onset more than others (Albert, Maina, & Bogetto, 2000). More specifically Maina et al. (1999) found that obstetric complications may be relevant to the development of the pOCD in mothers. In an older study, Neziroglu, Anemone & Yaryura-Tobias (1992) interviewed 106 women who had received two independent diagnoses of OCD from trained clinicians, 59 of whom had children and 47 without children. They found that among the women with children, pregnancy was associated with OCD onset more often than any other life event (39% of participants).

Williams and Koran (1997) found that in their sample of out-patients whom met criteria for OCD 29% of women reported worsening of pre-existing OCD during the postnatal period. They found that pregnancy was associated with OCD onset in only 13% of the women. In the previously mentioned study by Forray et al. (2010) with women with preexisting OCD, of 132 total pregnancies, 34.1% involved an exacerbation of symptoms, but interestingly 22.0% involved an improvement in OCD symptoms, and 43.9% did not report any change in symptom severity. It is clear that the prevalence studies mentioned have used differing methodologies and sometimes feature small sample sizes or had potential for response biases. Overall, despite differing reported rates, there is a clear trend in the literature that demonstrates an increased incidence of onset in the postnatal period and some evidence for exacerbation of pre-existing OCD over the perinatal period.

Despite variations in reports of prevalence, it is clear that a considerable number of

mothers (ranging from 10 in 100 to 3 in 100) meet OCD criteria postnatally. In all the studies discussed, the population of women reporting intrusive thoughts that have the potential to be experienced as distressing comprises a majority. The relative lack of focus on OCD contrasts with attention to other mental health problems that occur in this period, i.e. postnatal depression or psychosis, and therefore warrants attention both in research and clinically.

### **pOCD and Comorbidity**

In line with the cognitive model of OCD, women with pOCD will find intrusions distressing in themselves. In addition to this distress, obsessive–compulsive symptom severity has been moderately related to both anxious and depressive symptoms (Abramowitz et al., 2010; Abramowitz, Khandker, Nelson, Deacon, & Rygwall, 2006a; Jennings et al., 1999). For example, in a study by Williams and Koran (1997) 37% of the 24 women with both preexisting OCD and completed pregnancies reported postnatal depression. Broadening this to mood disorders in general Forray et al. (2010) found a comorbidity rate of about 65% of mood disorders with OCD (primarily major depression).

Comorbid depression severity has been found to be the single greatest predictor of poor quality of life scores (Masellis, Rector & Richter, 2003). Participants with severe initial depression showed significantly less improvement compared to those less depressed or non-depressed (Overbeek, Schruers, Vermetten & Griez, 2002). Non-depressed patients have been found to have significantly lower post-treatment and follow-up OCD severity



scores (Abramowitz & Foa, 2000). Yet, even highly depressed patients showed moderate treatment gains (Abramowitz, Franklin, Street, Kozak, & Foa, 2000). Importantly, if comorbidity has an impact on treatment, any investment by health care professionals (aside from a therapist) into skills that would improve a mother's overall wellbeing or symptoms of depression and/or anxiety, could be highly valuable.

### **Why focus on Perinatal OCD?**

Compared to the level of attention paid to postnatal depression and psychosis, the study of OCD with a perinatal onset has received considerably less attention (Abramowitz et al., 2003a). The same conclusion may be reached regarding clinical focus on perinatal OCD (or indeed anxiety; Miller, Pallant & Negri, 2006), such that those in the fields of obstetrics and pediatrics may be less familiar with its symptoms (Abramowitz et al., 2003a) compared to depression, e.g. with the widespread use of the Edinburgh Postnatal Depression Scale (Cox, Holden & Sagovsky, 1987). Another clinical element where this omission may be notable is in the training of health professionals.

Not only are women in the perinatal period at increased risk of developing OCD to a clinical level, women may struggle with intrusions in a way that could have a negative impact on their wellbeing and enjoyment of motherhood, and even mother-baby bonding (Challacombe & Wroe, 2013). Compared to a non-clinical comparison group, mothers with OCD differed in general parenting self- efficacy and enjoyment of everyday parenting tasks (feeding, nappy changing and play). In addition, observed interactions found mothers with OCD were less sensitive and also differed in terms of

observed warmth and vocalisations to the baby (Challacombe, 2014). Untreated perinatal OCD is associated with general stress in the family environment, child vulnerability to other types of psychopathology or compromised functioning (Challacombe & Salkovskis, 2009; Black, Gaffney, Schlosser & Gabel, 1998), impaired physical health and damage to social relationships (Challacombe & Wroe, 2013; Gezginç et al., 2008). Lack of training in this area can lead to misinterpretation of symptoms, including perceived risk issues (Challacombe & Wroe, 2013), with adverse consequences. Clinicians may mistake unwanted intrusive thoughts for more severe psychopathology or intent to harm the baby, thereby compounding the other negative factors relating to the condition.

Research looking at obsessive-compulsive symptomology longitudinally has found that the tendency to negatively interpret the presence and meaning of unwanted intrusive infant-related thoughts early in the postnatal period (3-4 weeks). This was found to be mediated by the relationship between pre-childbirth obsessive beliefs and late postnatal (12 weeks) obsessive-compulsive symptoms (Abramowitz, Nelson, Rygwall & Khandker, 2007). This would suggest the importance of supporting mothers in the early weeks regarding the occurrence of intrusions. Rosso, Bechon, Bogetto and Maina (2012) postulate that appropriate referrals assisting diagnosis of pOCD should be performed as early as possible, both to ensure the correct psychoeducation and timely access to psychological and/or psychopharmacological treatment.

Of course the impact on the infant and their development must also be considered. An over-controlling parenting style, which could logically be linked with some of the protective factors of OCD compulsions, has been implicated as an important variable for the development of childhood anxiety (Chorpita & Barlow, 1998; Barrett, Fox, &

Farrell, 2005; Rapee, 1997). Also of note is a lack of parental sensitivity and warmth, which could be linked to pOCD with mothers who are preoccupied in carrying out compulsions, has been linked with depression (Rapee, 1997). This provides further ground for urging early detection, referral and the use of basic CBT skills.

### **Misdiagnosis and Risk**

Mothers, experiencing distressing intrusions are at risk of exaggerating the importance of such cognitions to themselves since they are concurrently repugnant yet recurrent (Abramowitz et al., 2003a). This can lead to a belief that such unwanted ideas have implications for one's own moral character (e.g., "this thought means I am a bad person") or represent unconscious wishes to engage in aggressive behaviour toward the infant (e.g., "having this thought means I am likely to lose control of my behaviour"; "since I think this, I must really want it to happen").

It is evident that a mother with OCD may be harmed by an incorrect or unduly lengthy risk assessment, as this may serve as to reinforce beliefs that such intrusions suggest potential risk. At best the mother may respond with an increased fear of the implications of her intrusions, leading to greater distress, avoidance and compulsive behaviours, and mistrust of health professionals; at worst, to serious deterioration of their wellbeing or family break-up (Veale et al., 2009). Risk assessment therefore requires that the clinician possesses a good working knowledge of the phenomenology of the disorder as recommended in the National Institute for Health and Care Excellence (2005) guidelines on OCD.

Research and clinical reports have suggested that parents with violent obsessional thoughts commonly feel reluctant to describe such symptoms to others for fear of being misunderstood (Newth & Rachman, 2001). Indeed, this misunderstanding on the part of health professionals, and consequential damage to mothers' wellbeing, has been described in a recent paper by Challacombe and Wroe (2013). Mothers are instead more likely to discuss anxiety or depressive symptoms, which may result in suboptimal treatment (Hudak & Wisner, 2012). This demonstrates the requirement of a relevant skills set from the clinician. Therefore providing a rationale for screening or training in recognition of pOCD specifically, especially in women who present with anxiety and/or depression (Arnold, 1999). Increased awareness of pOCD will facilitate appropriate referrals and treatment (Hudak & Wisner, 2012). Researchers examining the above prevalence rates commonly conclude that pOCD should be screened for, particularly among mothers in risk categories, such as those with previous mental health difficulties (e.g. Zambaldi et al. 2009). Of course, much of the research, e.g. Zambaldi et al. (2009) is cross-sectional and therefore does not provide a basis for causal inferences.

Some useful papers, such as that by Ross and McLean (2006) have discussed the assessment required between OCD related intrusive thoughts/obsessions from infanticidal ideation characteristic of postnatal psychosis and severe postnatal depression. It is vital that clinicians working with women in the postnatal period are able to distinguish between them. Ross and McLean (2006) highlight the importance of assessment of the woman's level of insight. Women with OCD are typically aware that their obsessional thoughts and behaviours are unreasonable. They identify the intrusions as unwanted and separate from themselves (ego-dystonic), going to great lengths to

avoid acting on them (Abramowitz et al., 2003b). In contrast, women with postnatal psychosis typically lack insight, do not have fear or anxiety associated with the thoughts and, if not appropriately treated, may act upon hallucinations or delusions that prescribe harming their children and/or themselves (Spinelli, 2004).

Veale et al. (2009) have set out a considered distinction between the intrusive thoughts of OCD and the much more risky delusional thoughts of psychosis. Risk assessment within OCD can be divided into 'primary' risks and less obvious 'secondary' risks. Primary risks would be those arising directly from an obsession; the risk that the mother will act on an obsession (e.g. sexual acts with a child) or impulsively act out an obsessional fear. However, there are no recorded cases of a person with OCD carrying out their obsession (Veale et al., 2009, Ross & McLean 2006). By definition, the intrusions experienced by someone with OCD are unacceptable and ego-dystonic, representing a type of fear or worry that the person wishes to avert at all costs (Veale et al., 2009). Of greater concern is secondary risk –the unintended consequence of the compulsions (ironically, the actions that are intended to prevent potential harm) and urges to avoid anxiety-provoking situations - these may be more subtle (Veale et al., 2009). For example, a mother with contamination fears may delay feeding her infant due to compulsive sterilisation of bottles, or a mother who constantly checks her baby's breathing may result in severe exhaustion and the mother may become less responsive and emotionally available to the infant or her other children (Veale et al., 2009).

Veale et al. (2009) discussed the main factors to consider when seeking to differentiate obsessions from actual primary risk. Key assessment elements would be; are the intrusions ego-dystonic, is the behaviour consistent with the intrusive thoughts and

images, does the person try to avoid situations or activities that trigger intrusions, does the person experience sexual arousal with sexually intrusive thoughts, does the person attempt to suppress, neutralise or distract themselves from their intrusions, how frequent are the intrusions, what is the dominant emotional reaction (e.g. guilt, shame, distress, repulsion), does the person easily disclose material (e.g. do feel too ashamed to reveal the details), is there psychiatric comorbidity, is there history of sexual abuse, or history of accidental or deliberate exposure to sexually explicit material, what is the nature of the referral (i.e. are they seeking help voluntarily due to their worry over their obsessions) and what is the motivation to seek help? With training, ideally these questions would be something clinicians can hold in mind at assessment.

### **Psychological Treatment and Normalising**

The psychological treatment of perinatal OCD has yet to be studied extensively. In a review of the literature Abramowitz et al. (2003b) warned that the available reports feature small sample sizes, a lack of control groups and participants commonly not blind to their treatment condition, therefore expectancy effects over the duration of the study may have occurred. As there is no theoretical basis for predicting that perinatal OCD would respond differently from non-childbearing-related OCD, it has been recommended that typical exposure with response prevention protocols are followed (Abramowitz et al., 2003b) with adaptations made for the context (Hudak & Wisner, 2012).

More recently, Challacombe and Salkovskis (2011) sought to examine the impact of successful treatment on parenting in addition to the impact on OCD symptoms. Six mothers of infants aged 6-14 months with a primary diagnosis of postnatal OCD were recruited. Usefully, between the six mothers the nature of their OCD varied and included: fears children would become ill (n=1), ordering and arranging (n=1), harm coming to the baby (n=2) and contamination (n=2). They were treated using CBT intensively delivered over a two-week period covered over an initial 12 hours, following which monthly follow-up sessions were offered, (uptake was three sessions n=2, one session n=4). They found improvements on self-report and clinician-rated measures, which were sustained at 3-5 month follow-up. Not only did mothers report significant benefits in terms of their own symptoms but also in parenting in general, gathered via questions devised specifically for the study (e.g. how much does your OCD effect your ability to look after their physical needs, emotional needs, ability to have fun with them). Challacombe and Salkovskis (2011) concluded that adaption of a standard CBT protocol to provision over a short intensive duration appears to be effective and acceptable for this group and is likely to minimise the risk of disruption to the mother-infant relationship from the disorder. The neuropsychology of infant development and their future emotional regulation and wellbeing would suggest that this is a key point for clinicians to recognise. Time is of the essence and intense provision of therapy may be particularly apt (Gerhardt, 2015).

Salkovskis' model postulates that people with OCD misinterpret intrusions as having significance, in terms of potential harm to themselves or others, instead of a normal occurrence with no meaning. Therefore a key part of CBT for OCD comprises psycho-education regarding intrusions and normalising their occurrence (e.g. Veale, 2007;

Willhelm & Steketee, 2006; Salkovskis, 1999; Marks, 2003). Key research findings can be quoted in therapy that demonstrate that almost 90% of the population experiences upsetting intrusive thoughts (Rachman & de Silva, 1978; Salkovskis & Harrison, 1984).

However, a thorough literature search (PsycINFO, PubMed, EMBASE, Medline and SIGLE were searched for articles using normalising/normalizing or normalise/normalize with obsessive compulsive disorder/OCD or intrusions/intrusive thoughts –perinatal OCD was not searched for specially) yielded no literature specifically evaluating the effectiveness of normalising. Arguably this is an interesting point in itself considering its wide use. When the search terms were expanded to ‘psychoeducation’ in place of normalising this yielded some results, and abstracts were screened for relevance. However, when these articles were studied, psychoeducation did not specifically refer to normalising; articles typically did not explain what they meant by ‘psychoeducation’ and although it may be presumed that one element of the psychoeducation process would be normalising (in line with the treatment manuals mentioned above) it was not possible to separate out the various elements of psychoeducation and measure them specifically. It is clear that the treatment described was based on the CBT theory of intrusions as a normal experience, but it appears this, as a specific technique or element, has not been measured specifically.

The search did reveal one case study of pOCD that included data on normalising (Hudak & Wisner, 2012). The authors emphasised the importance of providing education about the nature of intrusive thoughts before initiating therapy. Within the case study they reported that psychoeducation enabled and motivated their client to accept exposure with response prevention, and that the subject described it as the most



important intervention she experienced. Again, as in much of the literature, the authors stressed that education of both women and health care professionals about the occurrence and nature of intrusive thoughts during childbearing should be expanded (i.e. training that features normalising and allows the health care professional to use this as a clinical tool).

In other papers, normalising is discussed but not specifically examined through research. For example, Salkovskis' (2007) paper on the psychological treatment of OCD concludes that for some OCD clients, normalisation and advice to cease neutralising may be sufficient in itself, although most will require skilled treatment. He argues that normalising intrusions is important in reducing anxiety due to fears of the meaning of their intrusions. He postulates that this will change the way intrusions are interpreted, helping the client to change their understanding of the significance of both the occurrence and content of intrusions.

A recent randomised double-blind controlled trial by Timpano, Abramowitz, Mahaffer, Mitchell and Schmidt, (2011) evaluated an antenatal prevention program delivered by trained study personnel (i.e. a psychology graduate student). The program featured psycho-education, including normalising, to address intrusive thoughts in the antenatal period. The study targeted women who were 'at risk' for developing pOCD. They found significantly lower levels of obsessions and compulsions in the treatment group compared to a control group (Timpano et al., 2011). Other than this study, there is little investigation into specialised prevention or screening models.

There are likely to be limitations to the inclusion of an intervention program like Timpano et al.'s (2011) in routine healthcare; it required parents to attend antenatal classes and was spread over six sessions. Relying on a model such as Timpano et al.'s (2011) could miss mothers who are not known to be 'at risk' prenatally who go on to develop pOCD, or at a sub-clinical level feel very distressed by the intrusive thoughts they are experiencing. Having health care professionals who work in the perinatal period able to detect and use basic skills for pOCD may have considerable value and possess potential to become widely applicable and effectively delivered.

### **Role of Health Visitors in Mental Health**

There were 9113 health visitors (full time equivalent) working in England in 2013 (Department of Health, 2013). Mothers routinely meet with health visitors during the postnatal period, usually at about 2 weeks following the birth for the first 'new birth' visit and again at a six to eight week postnatal visit. Their role presents a key opportunity to offer detection, referral and intervention to the mother's mental health needs. Their importance in this role is perhaps amplified by a recent report that highlights many women with perinatal mental health needs are falling through the gaps via their general practitioner (Khan, 2015). Health visitors routinely ask about symptoms of postnatal depression using the Edinburgh Postnatal Depression Scale (Cox et al., 1987), typically at the six-eight week visit. Health visitors may also ask about any previous mental health problems, including eating disorders for example. Much of what the health visitor identifies will be in an open format by asking about the mothers overall wellbeing. This open format is of potential concern, particularly in a context of work pressure on health

visitors. Health visitors in many areas are reported to be experiencing time pressure, in part due to posts being unfilled. Indeed, in a survey by the NSPCC, many mothers reported that their interactions with health visitors and midwives felt rushed and impersonal and 41% said their health visitor or midwife had never asked about depression (Hogg, 2013). This open question format is also of concern given that mothers may show a tendency to hide their distress around intrusions, for fear of being judged (as described above).

Postnatal depression training for health visitors has been found to result in improved skills, increased identification (e.g. Morrell et al., 2009; Appleby et al., 2003) and reductions in symptoms (e.g. Holden, Sagovsky & Cox, 1989; Dennis, 2009). These studies featured training that lasted for an hour a week for eight weeks (Morrell et al., 2009), two days (Appleby et al., 2003) and three weekly training sessions of two hours (Holden, Sagovsky & Cox, 1989). It is natural to expect that increased time in training should produce better outcomes. However, a longer length of training time may be a barrier to participation by service leads managing teams with high or complex caseloads. Some of these studies mention training in skills transferable to working with mothers with pOCD such as empathy, being non-judgmental, listening skills (Holden et al., 1989) and cognitive-behavioural principles (Morell et al., 2009). Despite the encouragement for training in pOCD within the literature, to-date, there has been no published research into any such training that is feasible to replicate within a UK clinical study.

Currently there is no mandatory requirement for perinatal mental illness to be covered in either midwife or health visitor pre-registration training (Hogg, 2013). In the present study, 33 health visitor course centers across England and Wales were contacted

regarding whether there was any inclusion of OCD in their training programs. Twelve responses were received (a 36.36% response rate). Six course centers said OCD is not covered. Three said it was covered in mental health teaching e.g. as part of a 2 hour lecture on 'Common Mental Health Disorders in the Perinatal Period' or in an Early Interventions module which covers maternal mental health and effects on the infant as well as in their Child Protection teaching. Three said it *may* be touched on in their mental health teaching. It was also highlighted that it may be covered indirectly for example if a student chooses to cover it in their project. OCD may have been covered in undergraduate nursing or midwifery courses; however nursing courses are unlikely to cover perinatal manifestations of OCD specifically.

### **Approaches to Improving the Skills of Health Visitors**

Previously, research has shown that whilst there is training in maternal mental health available, it is not widely accessed. This can be attributed to staff being very stretched, attendance at training not allocated as mandatory and competing demands for study time (Rowan, McCourt & Bick, 2010). In the 2014-2015 Health Education England Mandate the Department for Health sets a priority for developing a continuing professional education framework for early years professionals such as midwives and health visitors. This aims to ensure they have access to bespoke training to optimise the care and treatment of women with perinatal mental illness (Department of Health, 2014b). This follows the Call to Action (Department of Health, 2011) pledge to expand the health visitor workforce by 4,200 whole time equivalent new posts following concern over under-staffing in many areas.

Even if the provision of pre-qualification mental health teaching were improved, professionals in universal health services would still need regular training to refresh their knowledge and skills (Hogg, 2013). Training in pOCD could of course be counted towards health visitor's Continuing Professional Development. In 2013 the Department of Health funded the Institute of Health visitors to train a network of 300 perinatal mental health health visitor 'champions' (or mental health leads). This seeks to address the requirement for health visitors to manage anxiety, mild to moderate depression and other perinatal mental disorders and to understand the impact of these disorders on the child, the family and society, and knowing when to refer on. The plan was that these champions can disseminate knowledge to colleagues. The program is receiving positive feedback (Department of Health, 2014a). However, as previously highlighted, distress regarding intrusions is something mothers can find hard to raise unprompted. The health visitor working with that mother may therefore not be aware of the mother's OCD symptoms, and there is therefore potential for depression symptoms overshadowing OCD, meaning the health visitor may not discuss this with a champion. Therefore, while champion training in pOCD may provide benefits, wider reaching training, as with depression, could be argued as more desirable given the manifestation of intrusions and OCD.

### **NHS and Economics**

The onset and escalation of perinatal mental illnesses may be prevented through early identification and prompt and informed choices about treatment. However

approximately half of all cases of perinatal depression and anxiety go undetected and many of those which are detected fail to receive evidence-based forms of treatment review (Bauer, Parsonage, Knapp, Lemmi & Adelaja, 2014). Even where the illness itself is not preventable, through these strategies it is possible to prevent many of the negative effects of perinatal mental illness on families (Hogg, 2013). In turn, this, of course, is likely to have economic benefits. Awareness among professionals of what they should promptly recognise as needing further assessment therefore hastens this process.

Of particular use is a recent review by Bauer et al. (2014) of the economic costs of perinatal mental health problems. Unlike many other assessments it takes into account not only the costs directly associated with maternal mental illness but also the indirect costs and includes the impact of maternal mental health problems on the child, for example the impact on emotional, behavioural and cognitive development.

Perinatal mental health problems carry a total economic and social long-term cost to society of about £8.1 billion for each one-year cohort of births in the UK. However the NHS would need to spend just £337 million a year to bring perinatal mental health care up to the level recommended in national guidance (Bauer et al., 2014). Bauer et al. (2014) evaluated the costs of additional use of public services, productivity losses and Quality Adjusted Life Years (QALY) for mothers with symptoms of perinatal anxiety during the perinatal period to 10 years after birth. They included a range of anxiety classifications including OCD, generalised anxiety, panic disorders, phobias and post-traumatic stress disorder. For mothers, per case they found that the costs for health and social care were £4,320, QALY losses were calculated as £10,975 per case with productivity losses calculated at £5,499, producing a total of £20,794 across 10 years. This was still while

taking only a third of the original numbers to account for the prevalence of anxiety without comorbid depression. This has the advantage of not double counting the costs reported in the report for depression but means some of the costs related to anxiety fall under the costs of depression.

Their economic calculations on the impact of maternal perinatal anxiety on children were based primarily on data from the Avon Longitudinal Study of Parents and Children (ALSPAC; O'Connor et al., 2002; O'Donnell et al., 2014 as cited by Bauer et al., 2014). It is worth noting that data gathered for this part of the review was gathered from the United States, not the United Kingdom. They included outcomes on pre-term birth (including cognitive impairment) found to be associated with severe anxiety, emotional and conduct problems and chronic abdominal pain, which is at increased risk for children if their mother has postnatal anxiety. The total costs calculated for the public sector per child were £5,362 and the total costs for wider society were calculated as £8,655, an overall total of £14,017 for ages 5-16 years. Highlighting the development of mental health problems in young people as a consequence of maternal mental illness budget 2015 announced an additional £75 million over the next 5 years to give the right care to more women who experience mental ill health during the perinatal or antenatal period (HM Treasury, 2015).

### **Aims and Hypotheses**

In conclusion, there is clear evidence for the increased prevalence and exacerbation of OCD in the perinatal period (despite some variability in the literature) and distress

around intrusions is common in the nonclinical population. Here forms a potential role of health visitors in addressing such perinatal mental health needs. Offering an intervention of normalising for such experiences could prevent this distress (Barret, 2013). An understanding of the basic cognitive-behavioural model and the nature of intrusive thoughts may be helpful (Hudak & Wisner, 2012) for health visitors (Barret, 2013).

Any training should recognise that health visitors are not best placed to conduct cognitive behavioural therapeutic interventions such as exposure and response prevention. However being able to normalise the experience of intrusions, in clinical-level OCD as well as sub-clinical symptoms, may be of value in reducing maternal distress and anxiety. Training health visitors in pOCD so that they are able to recognise it and understand differences between primary and secondary risks may prevent misdiagnosis.

The first aim of the study was to improve health visitors' understanding of the occurrence and meaning of intrusions, and to equip them with questions and responses to use in their sessions with postnatal mothers. This study looked to examine the effects of the provision of pOCD training for health visitors on mothers. It was postulated that, with the underpinning of knowledge of intrusions, training could help health visitors develop strategies that they can use to normalise intrusions and thus help mothers, either at a clinical or non-clinical level, who are finding them distressing. In addition it was postulated that training can aid recognition of pOCD, preventing misinterpretation of risk, and can facilitate appropriate referrals and conversations regarding referrals with the mother. According to the evidence base of OCD treatment (Wilhem & Steketee, 2006;



Veale, 2007; Salkovskis, 1999), but beyond the scope of this study, it would be expected that, if studied longitudinally, offering normalising at the early stage at which health visitors are involved may be beneficial in reducing distress and obsessive-compulsive behaviours and therefore the spiraling of OCD symptoms to a clinical level.

Questionnaires were used to collect data, first from health visitors pre- and post-training. Next postnatal mothers from the general population who saw health visitors who had, and had not, attended pOCD training, were sent questionnaires. A normal population of postnatal mothers was opted for because of the prevalence of intrusions in the normal population and to ensure enough data could be collected in the time available for the research.

The following hypotheses were proposed:

Post pOCD training, health visitors would have:

1. increased knowledge of the prevalence of intrusions and confidence in working with mothers experiencing them,
2. and increased ability to identify potential pOCD and knowledge of the key skills in supporting this group.

Mothers who have seen a trained health visitor (mothers in the experimental group), compared to mothers who have seen an untrained health visitor (mothers in the control group), would:

3. talk about intrusions more with their health visitor,
4. be less bothered following intrusions and spend less time completing compulsions,
5. have fewer symptoms of depression, anxiety and stress.

The study's key hypothesis was hypothesis 4. This was the hypothesis most specific to OCD symptomology, by examining the extent of a mothers compulsions and the distress that intrusions cause. The study was also particularly interested in symptoms of depression, anxiety and stress (hypothesis 5) and whether training may impact positively on this. This represents an important time for mother to be feeling well as she looks after her new infant, so any more general positive findings would further support provision of any such training in the future.

## METHOD

This chapter will describe the groups and participants including sample size. Attention will then be made to the measures, many of which were devised specifically for the study. Summaries of service user development of the training package and its content are provided. Ethical considerations are made. Finally, the procedure is explained, including a summary of the analysis. From this point some abbreviations will be used, particularly for tables, including HV (health visitor) and PND (post-natal depression).

Health visitors in four geographical teams in an area in Surrey were invited to take part in the research. Two of these teams (forming Group 1 health visitors) were given training in perinatal OCD at the start of the study. Health visitors in the other teams received the same training at the end of the study, and formed group 2 health visitors. In both sets of training pre- and post-training measures were obtained on knowledge of, and confidence in working with, postnatal OCD. This included participants' ratings of presented video vignettes. Mothers seeing health visitors in both groups were invited to take part in the research by completing a postal questionnaire about obsessive-compulsive symptoms, symptoms of depression, anxiety and stress, and about whether they did, or felt they could, talk about intrusions with their health visitor. Responses of mothers seeing Group 1 health visitors (who had received training by this point) were compared to responses of mothers seeing Group 2 health visitors (who had not received the training at this point).

## **Design**

A mixed experimental design was used, combining within and between group comparisons. The within groups design was used to analyse differences between health visitor knowledge and confidence before and after pOCD training. A between groups design was used to compare mothers who had seen health visitors that attended pOCD training and mothers who had been seen by health visitors who have not attended the pOCD training. These analyses compared the experiences of mothers with their health visitors, OCD related symptoms and symptoms of depression, anxiety and stress between these groups. The study was a non-randomised design with recruitment organized according to the health visitor bases (see below).

## **Participants**

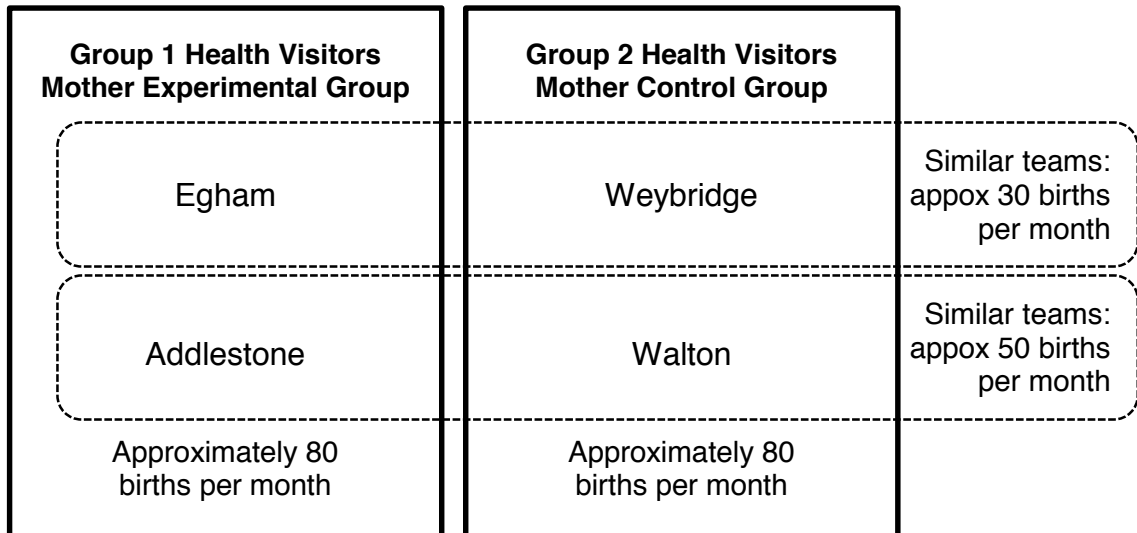
Health visitors from four health centers received training in perinatal OCD during the course of the study. This was staggered into two stages, at a nine-month interval, dividing the health visitors into two groups:

- Group 1 Health Visitors (n=17): All health visitors at two of the bases, including a second group of three new starters who attended the pOCD training two months following the first training. These health visitors attended the pOCD training at the start of the study.
  - Mean age = 47.93 years, ranging from 23 to 65 years.
  - Mean years qualified = 13.07 years, ranging from 0 years (just qualified) to 30 years.

- Group 2 Health Visitors (n=9). This group consists of the health visitors at the two remaining bases. These health visitors received training nine months following the Group 1 Health Visitors once all mother data had been collected. Training was provided to these health visitors because the service leads were keen to have their remaining health visitors trained on the topic and following positive feedback from the training from group 1 health visitors. In addition this allowed for further data to be collected on pre- and post-training measures.
  - Mean age = 44.89 years, ranging from 30 to 67 years.
  - Mean years qualified = 14.89 years, ranging from 1 year to 43 years.

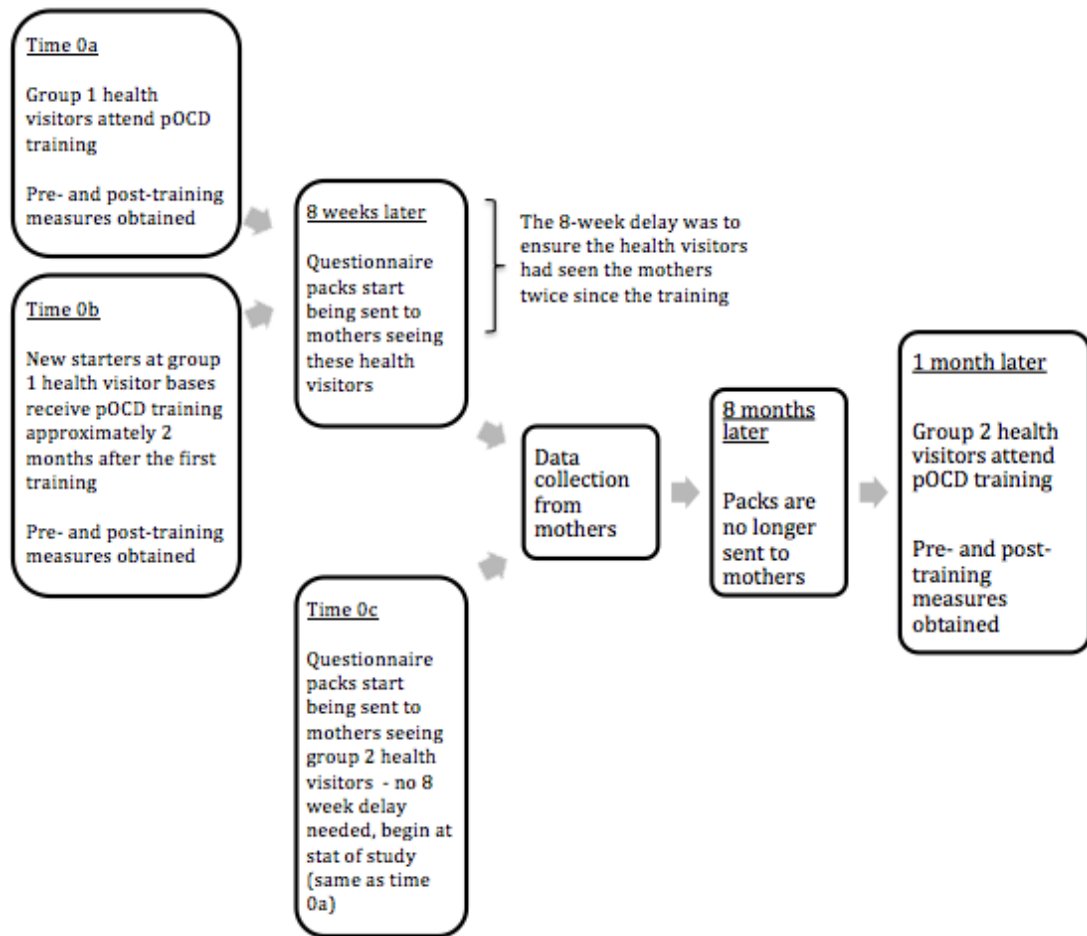
The staggered training schedule thereby distinguished two groups of postnatal mothers, as outlined in Figure 2.0:

- Mother Experimental Group (n=51): Women who have seen a Group 1 Health Visitor.
  - Mean age = 33.04 years, ranging from 22 to 44 years.
  - Mean age of baby = 60.78 days, ranging from 43 to 91 days.
  - 39/51 of this group defined themselves as White British.
- Mother Control Group (n=54): Women who have seen a Group 2 Health Visitor.
  - Mean age = 32.46 years, ranging from 23 to 43 years.
  - Mean age of baby = 63.24 days, ranging from 43 to 97 days.
  - 44/54 of this group defined themselves as White British.

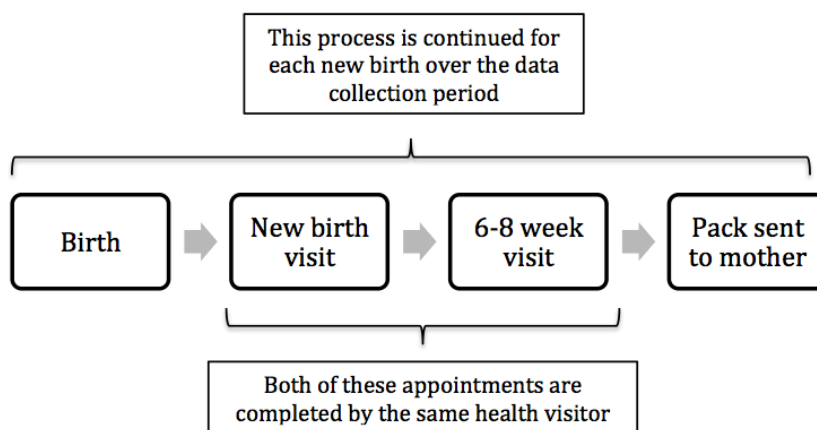


**Figure 2.0:** A diagram illustrating the division of the groups in the study

The procedure for data collection from health visitors and mothers is outlined in Figure 2.1 Further to this, Figure 2.2 explains the data collection procedure for mothers. As shown in the diagram mothers saw their health visitor for both a new birth visit and a six-eight week visit prior to data collection (in both the experimental and control groups).



**Figure 2.1:** The timeline of data collection from both health visitors and mothers.



**Figure 2.2:** The data collection procedure for potential mother participants.

For the main analysis health visitors are placed together as one group, but comparisons of demographics details are compared at the beginning of the Results section. As both groups combined (n = 26):

- all health visitors were female,
- their mean age was 46.74 years, ranging from 23 years to 67 years.
- their mean number of years qualified was 13.75, ranging from 0 years to 43 years.
- and 4 of the 26 health visitors reported that they had received some level of pOCD training prior to that in the study. Two of these health visitors were group 1 health visitors and two were from group 2 health visitors, therefore an previous training was unlikely to have an impact of knowledge and skills between groups.

### **Recruitment and Inclusion Criteria**

An enquiry was sent to a lead health visitor in Surrey to ask if they would like to host the project: both the training and research. The four health visitor teams cover the Surrey districts of Runnymede and West Elmbridge. As advised by the two lead health visitors for the four teams, the bases were grouped in accordance with number of births, similar area demographics and caseload pressures (as specified in Figure 2.0).

All health visitors at the bases attended training at the appropriate time-point. No exclusion criteria was applied. Some health visitors in group 2 were not able to attend the training due to annual leave. Provision of training was not sought for these health



visitors due to the time restrictions of the study and that their training would have no impact on mother data collection.

For a pack to be sent to a mother (in either mother group) she needed to have had her 6-8 week postnatal appointment with her health visitor and each pack was sent within two weeks following this - a mother's newborn baby would be approximately 6-10 weeks old at pack distribution. Mothers under 16 years were excluded. Mothers who had themselves, or their new baby had, serious current health problems or mothers whose newborn baby had gone into care (although unlikely to be seen by the community health visitors who were part of this study) were also excluded. Any mothers who returned their questionnaire whose baby was over 100 days old were also excluded as anecdotal evidence suggests that the age of baby may have an impact on the content of mother's intrusions. The service requested that any mothers who had opted out of being contacted about their separate service audit (unrelated to that measured in this study) to also be excluded. All participants had to be fluent in English. A telephone number was provided if the participant would find it easier to complete the questionnaire over the phone, however no participants opted for this.

### **Sample Size**

In order to ascertain the number of participants necessary in the postnatal mothers groups relevant studies were considered. The most relevant study was that by Timpano et al. (2011), which used a section of the Postpartum Thoughts and Behaviours Checklist (PTBC; Abramowitz et al., 2006). Another relevant study would be the Holden et al.

(1998) study, which looked at results with mothers following training health visitors in postnatal depression. However, both used non-parametric tests due to the nature of the specific questionnaires that they selected. Based on the lack of studies, the default position was to use a medium effect size. The Holden et al. (1998) used a chi-square analyses and yielded a medium effect size of 0.318. Using G-power in order to obtain a power of 0.8 and a significance of  $<0.05$  51 participants would be needed in each postnatal mothers group. An observed effect size of  $d = 0.40$  ( $n = 105$ ) was found when examining the mother experimental and control groups on scores for the PTBC, which is a small effect size.

For health visitors the closest fit found was a paper by Appleby et al. (2003) on training health visitors in 'Cognitive Behavioural Counseling' skills for depression. The overall score of the seven counseling skills produced an effect size of 1.88. However, working more conservatively, of the seven counseling skills promoted in their training we picked the counseling skill that seemed most relevant to the clinical skill around normalising - addressing patient concern. Using G-power this gave an effect size of 0.57, indicating we would need a sample of 10 health visitors. Due to the requirements for the number of mother participants, the number of health visitors trained well exceeded this figure.

## **Measures**

All data was gathered via questionnaires. Where applicable, cronbach alpha was calculated to investigate internal consistency of the measures.

## Health Visitor Questionnaires

An identical questionnaire was delivered to health visitors pre- and post- the training. The final question on the post- questionnaire was asked only once; whether they had ever attended any training on OCD before. This was not asked in the pre- questionnaire in order to avoid bias responses by cueing participants into training content. All elements of the health visitor questionnaire were devised specifically for the study, this included the development of video vignettes incorporated into the training and used to gather data. For the full health visitor questionnaire see Appendix 1.

### *Knowledge of the prevalence of intrusions and confidence in working with mothers experiencing them:*

Hypothesis 1 was tested by devising items specifically for the study. Health visitors were asked to rate the percentage of mothers they thought experience three categories of intrusive thoughts: contamination, fears over baby's safety and of actively doing something that would harm their baby. Each of these was paired with a rating of confidence in supporting a mother who was experiencing these intrusions. The choice of categories was based on papers examining intrusion content in these three areas i.e. fears of intentionally or accidentally harming the fetus or child (Buttolph & Hollander, 1990; Sichel et al., 1993; Arnold, 1999; Maina et al., 2000; Wisner, et al., 1999), contamination (Zambaldi et al., 2009) and fears that their baby may not be safe e.g. their baby dying or having an accident (Zambaldi et al., 2009). Participants were also asked to rate what percentage of mothers experience intrusive thoughts of any kind. Two control items were also included: both featuring a rating of occurrence and a rating of confidence in supporting a mother experiencing it.

*Ability to identify potential pOCD, knowledge of key skills in supporting this group: Development and Piloting of Vignettes*

Four video vignettes were devised to analyse hypothesis 2. The vignettes were designed to cover two different presentations of pOCD and two control vignettes on other topics considered to be commonly seen by health visitors. The two non-pOCD vignettes were devised as control measures, serving to help measure whether health visitors were able to distinguish between those and the pOCD vignettes.

Once recorded, the vignettes ranged from 26-38 seconds in duration. They were devised to represent a short snippet of information that perhaps a mother may tell their health visitor at the end of an appointment. The rationale for their brief nature was twofold: firstly not to consume a large amount of training time, secondly to heighten awareness of the cues that mothers may give to which health visitors would ideally ask further questions.

Below is an overview of the vignettes, the abbreviated vignette name that will be used within the tables is shown in brackets. Firstly two pOCD vignettes were designed:

1. A contamination pOCD vignette (OCD contamination) – a more widely recognised pOCD presentation.
2. A pOCD with intrusive thoughts of harm to baby vignette (OCD Harm) – considered a less recognised pOCD presentation (see research on impact of misdiagnosis of pOCD in the literature section above).

It is anticipated that greater changes pre- and post-training will be observed in the OCD harm vignette than for the OCD contamination vignette due to the contamination

vignettes being more widely recognisable, therefore impacting on pre-training knowledge.

Two other vignettes, were designed to form control vignettes:

3. A depression vignette (PND)– a presentation health visitors commonly see within their clinical practice and are regularly reminded to consider via the Edinburgh Postnatal Depression Scale.
4. A vignette featuring thoughts about harming the baby in a non-egodystonic presentation (Obscure Harm) – chosen to help health visitors examine the differences between this and the pOCD with intrusive thoughts of harm to baby vignette.

While developing the video vignettes the research team sought to validate the vignettes through a series of opportunistic pilots. Four stages of written scripts were piloted, followed by the finalised videos themselves. At each stage the researcher sent the request out to a new set of people so at each stage the responders were seeing the vignette for the first time. Between each stage minor adjustments were made to the scripts as well as the questions themselves (see Appendix 2 for the scripts and responses for each of the five stages). Table 2.0 outlines the final scripts for each of the vignettes.

**Table 2.0:** Scripts of the four final vignettes used in the videos and in the training

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**Final Vignettes**

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*OCD Contamination 'Penny':*

HV: "How are you coping generally?"

Mum: "I'm really worried about my baby getting ill. I keep thinking about the bottles. But I suppose it's good to wash bottles a lot to be sure"

HV: "What kind of thing do you mean?"

Mum: "I do like to make sure the bottles are clean enough. I don't like it when she is screaming for a bottle and I need to sterilise it again to be sure it's clean. Other mums seem to be coping better than me"

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*PND 'Jane'*

HV: "How are you coping generally?"

Mum: "Well ok. I've definitely noticed how much life's changed since I had the baby. I'm just feeling overwhelmed."

HV: "What kind of thing do you mean?"

Mum: "I love my baby so much but I don't feel good enough to be her mum. I worry that I can't do it properly which gets me down. Other mums seem to be coping better than me."

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*Obscure Harm 'Sarah':*

HV: "How are you coping generally?"

Mum: "I'm worried I shouldn't be a mum. I have some bad thoughts when I feel stressed. I do love my baby but I think I need some more childcare support"

HV: "What kind of thing do you mean?"

Mum: "Sometimes I just can't cope and feel frustrated with things at home"

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so then I end up thinking about hurting my baby.”

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*OCD Harm 'Rachel':*

HV: "How are you coping generally?"

Mum: "I'm worried I shouldn't be a mum. I have some horrible thoughts. I do love my baby so much though. I would never want any harm to come to my baby."

HV: "What kind of thing do you mean?"

Mum: "Oh just horrible thoughts when I bathe the baby- about what I could do to my baby. People do hurt their babies sometimes and it worries that mums can do that kind of stuff and I try not to think about it.”

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### **Mother Questionnaire**

This questionnaire, delivered once, contained three components specific to the research questions: the Depression Anxiety Stress Scales – 21 (DASS-21; Lovibond & Lovibond, 1995), an adapted section of the Postpartum Thoughts and Behaviours Checklist (PTBC; Abramowitz et al., 2006), and questions devised specifically for the study. Both questionnaires were not subject to copyright restrictions. As the questionnaire refers to intrusions the definition of intrusions, used in the Responsibility Interpretations Questionnaire (Salkovskis et al., 2000), is provided at the beginning of the questionnaire. Demographic questions regarding (i) number of days/weeks since birth, (ii) age and (iii) ethnicity are requested at the end of the questionnaire. All measures can be seen in the mother questionnaire in Appendix 3. Please note that although the PTBC uses the word 'behaviours' in the questionnaire, in this study the term compulsions will be used

throughout as this better encompasses mental compulsions/neutralising in addition to behavioural compulsions.

*Talking about intrusions with their health visitor:*

Questions were developed specifically for the study to answer this research question.

Questions about whether the health visitor spoke about intrusions and how easy would it have been to talk about intrusions were chosen to measure the uptake of the skills taught in training:

1. Did your health visitor talk to you about intrusions? (yes/no)
2. How easy would it have been (or was it) for you to talk to your health visitor about any intrusive thoughts you are experiencing? (scale of 1-10)
3. How likely would you be to talk to your health visitor about any intrusions you are experiencing? (If you did talk to your health visitor about intrusions, please rate 10) (scale of 1-10)
4. Did you talk to your health visitor about your own experiences of intrusions? (yes/no)

*Extent to which mothers were bothered by intrusions and behavioural symptoms consistent with OCD:*

There is a lack of psychometrically valid instrumentation specifically focusing on obsessive-compulsive symptomology or intrusions at this stage in women's lives (Kurtinaitis et al., 2011) particularly in consideration of the research demonstrating specific baby related intrusions. The PTBC is one such option, based on a modified version of the Yale- Brown Obsessive Compulsive Scale symptom checklist (YBOCS; Goodman et al., 1989a; 1989b). In its original form it is designed to be delivered in interview format and consists of 32 common postpartum intrusive thoughts or



obsessions (e.g., thoughts about SIDS) and 14 behavioural and mental compulsions (e.g. frequently checking on the baby). It can therefore be used to identify the presence and the content of postpartum intrusive thoughts, level of distress they cause, strategies used to neutralise such thoughts and time spent doing so.

Versions have been used in studies including Abramowitz et al. (2006; 2007; 2010); Timpano et al. (2011) and Barrett (2013). In a Portuguese translated version, of which a back-translated version was approved by the original author, participants did not show difficulties understanding the items. The version was administered to 91 women in the postnatal period and a Cronbach's alpha of .822 demonstrated very good internal consistency for the scale (Kurtinaitis et al., 2011). The authors confirmed the presence of such thoughts and strategies by many of these women and subsequent discomfort. However the paper to follow up these results is yet to be published. It is worth noting that the characteristics of the sample were different from the present study; the author reported a participant group with a low income and education levels and culture towards mental health may be considerably different in Brazil compared to a UK predominantly White British population.

A shortened version used by Barrett (2013) was used in the present study based on the nine key themes of intrusions described by Abramowitz et al. (2003a): baby suffocating, illness, baby having an accident, sexual thoughts about baby, losing the baby, cot death, baby getting contaminated, intentionally harming the baby, magical thinking about bad things happening to the baby, An 'other' category was also provided in which the participant is asked to state the intrusion if relevant. These are presented as a checklist. Ten key themes of mental and behavioural compulsions are then presented in a similar

checklist form: self-reassurance, seek reassurance from others, religious prayer, checking, seeking social support in general, cleaning, behavioural distraction (trying to do something else), avoidance, cognitive distraction (trying to think about something else), performing a ritual (e.g. counting, tapping or straightening). Again, an ‘other’ category was provided. Participants are then asked to rate how bothered they are by each of the intrusions and the amount of time they spent engaging in the mental and behavioural compulsions.

This shortened version was considered more appropriate for the present study in order to enable a higher response rate by not appearing to be too time-consuming to potential participants, in combination with the length of the rest of the questionnaire. This is particularly relevant to a postal questionnaire method that requires researchers to minimise any barriers to the response rate.

In the present study Cronbach’s alpha revealed an acceptable level of internal consistency for the PTBC bothered by sub-scale ( $\alpha = 0.74$ ) and the PTBC compulsions sub-scale ( $\alpha = 0.80$ ).

*Symptoms of depression, anxiety and stress:*

The DASS 21 is a 21 item self-report questionnaire designed to assess the severity of the core symptoms of depression, anxiety and stress. Participants are asked to rate the extent to which they experienced each state during the past week on a four-point likert rating scale. It is commonly used with perinatal populations (e.g. Miller et al., 2006). Its subscales are relevant to measuring the overall wellbeing of postnatal mothers in the study.

In the measures manual Lovibond and Lovibond (1995) reported alpha values from a student sample ( $N = 717$ ) of .81 for depression, .73 for anxiety, and .81 for stress. In a clinical sample from a mood disorders program, Clara, Cox and Enns (2001) reported high levels of internal consistency for the DASS-21 with alpha values of .92 for depression, .81 for anxiety, and .88 for stress. Their factor analyses indicated that a 3-factor model for the DASS-21 was supported.

Anthony et al. (1998) evaluated psychometric properties of the DASS-21 in a non-clinical sample ( $n=49$ ) and five clinical groups including panic disorder ( $n=67$ ), obsessive-compulsive disorder ( $n=54$ ), social phobia ( $n=74$ ), specific phobia ( $n=17$ ), and major depressive disorder ( $n=46$ ). They used Cronbach's alpha to assess internal consistency, finding .94 for Depression, .87 for Anxiety, and .91 for Stress. For concurrent validity they computed correlations with other measures: the DASS-21-D correlated most highly with the Beck Depression Inventory (BDI; Beck, Steer & Carbin, 1988;  $r=.79$ ), the DASS-21-A with the Beck Anxiety Inventory (BAI; Beck, Epstein, Brown & Steer, 1988;  $r=.85$ ) and the DASS-21-S with the BAI ( $r=.70$ ), although this subscale was also found to have similar correlations to the BDI ( $r=.69$ ) and the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch & Lushene, 1970 as cited by Anthony et al., 1998;  $r=.68$ ). More relevant to the present study, with a convenience sample of 325 primiparous mothers, Miller et al. (2006) found adequate Cronbach alpha coefficients of .84 for Depression, .77 for Anxiety and .86 for Stress.

In the present study Cronbach's alpha revealed an acceptable level of internal consistency for the depression and anxiety sub-scales scales ( $\alpha = 0.73$  and  $\alpha = 0.71$

respectively) and a good level of internal consistency for the stress sub-scale ( $\alpha = 0.83$ ).

### **Procedure – Health Visitors**

The project began by delivering a training package to a group of health visitors. This first group was the group of health visitors who would see the experimental group of mothers as outlined in Figure 2.0. As discussed in the Introduction, training was designed to be delivered in a short, accessible, ninety-minute time-period. Health visitor knowledge was evaluated pre- and post-training using the questionnaires described in the Measures section above. At the point of training health visitors were provided with a Participant Information Sheet (see Appendix 4) and a Consent Form (see Appendix 5), which were collected prior to completion of the questionnaire. At the end of the study, when health visitors in group 2 attended training, they were provided with a condensed Participant Information Sheet (see Appendix 6) omitting the information about the mother part of the study (as data collection for mothers had completed). The questionnaire was specifically developed for the training, which allowed for completion of the questionnaire to be incorporated into part of the learning process itself, therefore making best use of the ninety-minutes. It was incorporated by a discussion of the videos at the end of the training (once all measures had been collected). Participants began by watching the four video-vignettes, in which the researcher allowed the group to finish questions on each vignette before playing the next. Following this, participants could move on to the remaining questions. The questionnaire was collected before the main body of training content was presented. The same questionnaire was repeated after completion of the presentation. Following completion of the post-training questionnaire,

participants had the opportunity to explore and discuss what they had identified in the vignettes. Although there is potential for a priming effect with the post-questionnaire delivered immediately following training, this method was chosen to obtain a direct comparison pre- to post-training and to maximise the response rate for health visitors.

All health visitors (in both groups) were given the same information concerning the research at the beginning of the study and were made aware that mothers they see would be sent a questionnaire via an information sheet (see Appendix 7). At the same time, they were also provided with a control leaflet providing information on depression, anxiety and obsessive-compulsive disorder (see Appendix 8). Specific to the Group 2 health visitors, it was expected that simply possessing an awareness of the research would not provide health visitors with the relevant skills to support mothers who were distressed by intrusions.

Health visitors seeing the mothers in the control group were trained following the end of the mother recruitment stage. The training package and methodology were kept as identical as possible to the first training presentation.

### **Service User Development of Training**

Recently there has been increasing emphasis on service-user involvement in the development of staff training (e.g. Faulkner et al., 2014). In a review of service user involvement in health professional training Repper and Breeze (2007) found tentative evidence that such involvement in training enhances workers' skills in a manner prioritised as important by clients. However there is little evidence that existing

mechanisms for involving service users in training and education lead directly to improvements in mental health services. Training in pOCD, an area requiring development, could present a key opportunity to involve service users. Service user involvement with training should seek to produce training that is grounded in the real world and reflects the experiences of service users (Basset & Evans, 2009).

Three ex-service-users who had experienced OCD postnatally were invited to attend an interview via online video calling. The individuals were recruited via Maternal-OCD, a voluntary organisation dedicated to raising the profile of pOCD. The purpose of the interview and confidentiality were explained. A series of questions were devised to help explore their experiences with their health visitor, focusing on what they believed would have been / was helpful for them when they saw their health visitor. Prompts and clarifications were used when necessary. Interviews were first transcribed and then responses to each of the questions were summarised for each ex-service user. Due to the scope of the project the research team only sought to summarise the responses, which can be found in Appendix 9.

The main points mentioned by more than one ex-service user were that the health visitor should be able to provide information about OCD, CBT and signpost accordingly. Two interviewees emphasised the need for the health visitor to appear calm and empathic, and not shocked by the content of a mother's OCD/intrusions. Involvement of partners or family was also highlighted twice. All interviewees emphasised the need for health visitors to focus on emotional wellbeing by asking clear questions about this, without just focusing on postnatal depression. All interviewees described normalising as a helpful skill/process.

## Training Content

Training was delivered by a Clinical Psychologist who specialises in Obsessive-Compulsive Disorder and has clinical and research experience with pOCD. This psychologist was the field supervisor of the study and therefore it must be acknowledged that she was aware of the measures and hypotheses of the study and may have been influenced to highlight certain aspects of the training to target this. Service users were also involved in the development of training material. The training was titled *Perinatal Obsessive Compulsive Disorder: What is it and how can you help mums?* (see Appendix 10 for the training slides and Appendix 11 for the training handouts).

The training package aimed to:

- increase knowledge of the occurrence and content of intrusions,
- describe how misinterpretations of intrusions can lead to compulsions consistent with OCD – the CBT model and how obsessions and compulsions are propelled/maintained – describing different forms of OCD
- discuss prevalence, acknowledge typical focus on depression
- consider the consequences of pOCD, including isolation, distress,
- consider basic therapeutic skills such as empathy, consideration of mother’s fears about telling a health professional, recognising the strengths of a mother – skills transferable from depression
- teach basic CBT skills that are a key part of evidence-based CBT treatment of OCD, namely normalising,
- help health visitors to differentiate between primary and secondary risk and subsequent safeguarding concern,

- provide information about signposting, further support and how to consider family members,
- teach skills to identify mothers with pOCD.

The above demonstrates the inclusion of what was emphasised in the service-users interviews. This final component described above (skills for identification) is beyond the scope of the study, as investigation of this would require longitudinal data but has been deemed an important training aim. This is relevant to deter misdiagnosis as well as reducing long-term health and social care costs.

### **Procedure – Postnatal Mothers**

Mothers from both groups were sent an identical package containing:

- An invitation letter (see Appendix 12)
- A participant information sheet (see Appendix 13)
- A consent form (see Appendix 14)
- A questionnaire
- A prize draw form (see Appendix 15)
- A pre-paid return envelope

This package was sent via post. A coloured symbol was placed at the end of each questionnaire so that the research could identify which base (and group) at which the mother had seen. For confidentiality reasons, administrators at the four health visitor bases addressed the enclosing envelope and posted the packs to potential participants. They were aware of the exclusion criteria and distributed the packs accordingly. Packs



were sent following attendance of the mother and baby's six-eight week appointment. At this point mothers would have had at least two contacts with their health visitor: this appointment and their new birth visit. Distribution of packs following the six-eight week appointment was chosen on advice of the two lead health visitors at the four bases as this appointment allows for more flexibility to discuss the mother's wellbeing than the new birth visit, therefore more able to apply knowledge and skills gained in training. It is also at this point that health visitors typically administer the Edinburgh Postnatal Depression Scale and thus are focusing on mental health aspects of care.

### **Ethical Considerations**

A Maternal OCD Co-founder and recovered service-user was consulted on the questionnaires for mothers and on ethical components of the methodology. One key piece of feedback she emphasised concerned how time demanding it is being a new mother. She also made suggestions regarding length of questionnaire and inclusion of a voucher incentive. Therefore all mother participants had the opportunity to be entered into a voucher prize draw. Boots vouchers were suggested so that the mother could choose to either spend the voucher on something for her baby or something for herself. This was agreed within the study protocol. She provided feedback that the participant information sheet was clear and supportive.

It was important to consider the possibility that mother participants could find questions on their wellbeing and on intrusive thoughts distressing. The Participant Information Sheet contained a supportive paragraph acknowledging this and recommended contacting their General Practitioner (GP) if they felt the questionnaire raised concerns.

Participants were given the opportunity to contact the research team, including the researcher or the research supervisor who had clinical experience of working with pOCD. This element was also considered during the Service User Consultation and they deemed that questionnaire items were appropriate.

Firstly the study received proportionate review approval from the National Research Ethics Service Committee West Midlands (see Appendix 16). The study was then granted 'recommended approval' by Sussex NHS Research Consortium (see Appendix 17) before being sent to the Virgin Care Ethics Committee who granted full ethical approval (see Appendix 18). The study also received full ethical approval from the Royal Holloway Psychology Departmental Ethics Committee (see Appendix 19). Approvals were also granted for a minor amendment where the mother invitation letter was introduced alongside minor changes to the mother Participant Information Sheet (see Appendix 20) and a substantial amendment for an increase in voucher incentive (see Appendix 21). Informed consent was obtained for all participants via participant information sheets and consent forms. Both health visitor and mother participants could complete their questionnaires anonymously.

## **Analysis**

### *Health Visitors*

To test Hypothesis 1 a repeated measures mixed model analysis of variance (ANOVA) was conducted to examine pre- and post- training ratings of the frequency of the different intrusions and control items. Repeated measures was used these to look at any

change pre- to post-training of the pOCD related intrusions (i.e. the vignettes relevant to what was taught in the training) compared to the control thoughts for ratings of the prevalence of intrusions. Post-hoc t-tests were then applied to examine pre-post differences for the ratings of intrusions and control items prevalence individually.

For ratings of confidence in working with mothers experiencing pOCD related intrusions t-tests were used to examine pre- and post-training differences across each of the pOCD related intrusions and the control thoughts. Data from the two groups of health visitors were examined separately for these items as pre-training differences in confidence were found in initial data checking (see Results section).

Multiple analyses were used to examine the data collected via the vignettes regarding Hypothesis 2. Repeated measures mixed model ANOVAs were used to explore main effects and interactions in likelihood to refer, level of safeguarding concern and confidence working with the mum, following which post-hoc t-tests were conducted accordingly. The repeated measures analyses were used these to look at any change pre- to post-training of the pOCD vignettes as compared to the control vignettes. Chi-square was used to analyse pre- post-training differences for whether participants were naming primary or secondary risks, choosing 'likely to be helpful' or 'unlikely to be helpful' responses to the vignettes and to examine the potential diagnoses named for each vignette.

### *Mothers*

For Hypothesis 3 independent samples chi-square tests were used to compare means between the control and experimental groups for whether the mother talked to her

health visitor about intrusions. T-tests were used to examine how easy they would have found it to discuss intrusions or how likely it would have been to discuss intrusions with their health visitor.

Results from the PTBC regarding Hypothesis 4 were also analysed using independent samples t-tests. Similarly, data for Hypothesis 5 from the DASS-21 were analysed using an independent samples t-test for overall scores.

## RESULTS

### Overview of Hypotheses

The results section will be divided into two main sections, data for the health visitors, analysing Hypotheses 1 and 2, and then for the mothers, analysing Hypotheses 3, 4 and 5. Treatment of data and descriptive data will be presented for each group prior to the analyses. The hypotheses are repeated in each section for ease of reading.

Hypothesis 1: Post pOCD training, health visitors would have an increased knowledge of the prevalence of intrusions and confidence in working with mothers experiencing them.

Hypothesis 2: Post pOCD training, health visitors would have an increased ability to identify potential pOCD and knowledge of the key skills in supporting this group.

Hypothesis 3: Mothers who have seen a trained health visitor (mothers in the experimental group), compared to mothers who have seen an untrained health visitor (mothers in the control group), would talk about intrusions more with their health visitor.

Hypothesis 4: Mothers who have seen a trained health visitor (mothers in the experimental group), compared to mothers who have seen an untrained health visitor (mothers in the control group), would be less bothered following intrusions and spend less time completing compulsions.

Hypothesis 5: Mothers who have seen a trained health visitor (mothers in the experimental group), compared to mothers who have seen an untrained health visitor

(mothers in the control group), would have fewer symptoms of depression, anxiety and stress.

## Health Visitor Data

### Treatment of Data

Exploratory analyses were conducted to check that all continuous data met the assumptions required for parametric testing. First, skewness and kurtosis were examined. Due to the number of variables measured in the study, the details of skewness and kurtosis data for training variables can be found in Appendix 22 Tables 5.6-5.15. All continuous data were screened for outliers in each group. Any scores which fell three standard deviations above or below the mean were winsorised. This method was chosen due to the study's relatively small sample size and because removal of data would decrease the power of the study. Following winsorising of the outliers in each group, the skewness and kurtosis of the data were re-examined.

Pre-training z scores for skewness for Obscure Harm *likelihood to refer mother for an assessment of her mental health* and Obscure Harm *how much do you think there is a child safeguarding concern* were both significantly negatively skewed ( $z=-8.76$  and  $z=-4.04$  respectively). The post-training z score for OCD Harm *likelihood to refer mother for an assessment of her mental health* was significantly negatively skewed ( $z=-2.60$ ). The post-training z scores for OCD Contamination *how much do you think there is a child safeguarding concern* ( $z=3.41$ ) and PND *how much do you think there is a child safeguarding concern* ( $z=3.21$ )

were significantly positively skewed. Skewness and kurtosis were within the accepted bounds for all other variables.

Pre- and post- pairs were both required to be transformed in the same way due to the analyses used. A square root transformation was conducted for the two positively skewed scores. This resulted in these z scores becoming within acceptable bounds: OCD Contamination *how much do you think there is a child safeguarding concern* pre-training (transformed  $z=0.79$ ) and post-training (transformed  $z=1.12$ ) and PND *how much do you think there is a child safeguarding concern* pre-training (transformed  $z=-0.95$ ) and post-training (transformed  $z=0.62$ ). Reflected square root and reflected log10 transformations were both conducted on the three significantly negatively skewed variables (for both pre-training and post-training variables). The reflected log10 transformation was successful for one pre-post pair of the variables (OCD Harm *likelihood to refer mother for an assessment of her mental health* pre-training transformed  $z=0.44$  and post-training transformed  $z=-0.92$ ). However, this was not successful for the remaining two pairs of variables. For one pair the skew reduced but not into acceptable bounds (Obscure Harm Pre-training *likelihood to refer mother for an assessment of her mental health* went from non-transformed  $z=-8.76$  to transformed  $z=4.13$ ). For the Obscure Harm the transformation put the post-training into acceptable bounds but pushed the pre-training score to becoming significantly skewed (Obscure Harm *how much do you think there is a child safeguarding concern* post-training went from non-transformed  $z=-4.13$  to transformed  $z=1.36$  but pre-training went from non-transformed  $z=0.69$  to transformed  $z=-4.04$ ). As there is not a non-parametric test available for the required analyses a decision was made to continue with the planned analyses with the original sets of scores for these two variables.

## Description of Participants

There were two groups of health visitors to make up the control and experimental groups of mothers:

1. Group 1 Health Visitors (n=17) trained first; and
2. Group 2 Health Visitors (n=9) who were trained following collection of mother data.

All health visitors who attended training consented to participate and completed both questionnaires, therefore this part of the study had a 100% response rate.

The two health visitor groups were checked for similarity. Comparisons were made of the demographic data gathered. All health visitors were female. As shown in Table 3.0 there were no significant differences in age of health visitors ( $t[21]=0.61$ ,  $p=0.55$ ) or the number of years qualified ( $t[22]=-0.320$ ,  $p=0.75$ ).

**Table 3.0:** Comparison of the health visitor demographics

<b>Demographic</b>	<b>HV Group 1</b>	<b>HV Group 2</b>	<b>Group Comparisons</b>
	<b>Mean (s.d)</b>	<b>Mean (s.d)</b>	
<b>Age</b>	47.93(10.99)	44.89(12.68)	$t[21]=0.61$ , $p=0.55$
<b>Years qualified</b>	13.07(12.42)	14.89(15.19)	$t[22]=-0.320$ , $p=0.75$

Similarly a chi-square test found no significant differences between group 1 health visitors (14/17, 82.35%) and group 2 health visitors (8/9, 88.88%) for whether they had attended any training on OCD prior to the training of this study ( $\chi^2[1]=0.19$ ,  $p=0.66$ ).



### **Pre-training group comparisons**

Next, pre-training scores on all the measures were compared between health visitor group 1 and health visitor group 2. These comparisons were made in order to test whether both groups began with the same level of knowledge and thus to establish whether there were any influences on mother scores due to one group being more knowledgeable pre-training.

As displayed in Table 3.1, t-tests found no significant differences between groups regarding knowledge of the population prevalence of different intrusions types (four OCD related intrusions and two control items). Self-report ratings of their confidence in supporting a woman with different intrusion types were significantly higher in group 2 health visitors for three intrusion types (*not properly washed/cleaned baby items*, *baby may not be safe* and *harming their baby*) but only one (*harming their baby*) of these was significant at the Bonferroni corrected significance level. This difference is in a direction that would mean that the results were more conservative (as the control group rated higher confidence than the experimental group). Furthermore, in the context of all other pre-training comparisons revealing non-significant differences, and because this measure does not represent skill or knowledge level, this was not considered this to be a difference likely to impact on mother scores between groups. As there were no significant differences in knowledge of the prevalence of intrusions or in other OCD-related skills it is not clear as to why confidence in working with mothers with these three intrusions is higher for group 2 health visitors than group 1 health visitors.

**Table 3.1:** Comparison of pre-training ratings of frequency of intrusion and confidence

		Question	HV Group 1 Mean (s.d)	HV Group 2 Mean (s.d)	Group Comparisons
<b>What percentage of mums of babies do you think experience recurring thoughts about:</b>	<b>Control</b>	Not being a good enough mum	67.35(22.23)	58.89(33.71)	t[24]=0.77, p=0.45
		Baby is not dressed well enough	39.69(22.84)	40.56(33.30)	t[24]=-0.78, p=0.94
	<b>OCD related</b>	Not properly washed/cleaned baby items	33.82(18.25)	44.44(33.68)	t[13.92]=-2.13, p=0.05
	<b>intrusion</b>	Baby may not be safe	52.94(28.18)	50.56(35.92)	t[24]=-0.19, p=0.85
		Harming their baby	22.65(20.40)	30.56(24.93)	t[24]=-0.87, p=0.39
		Intrusive thoughts of any kind	51.76(30.21)	53.33(36.32)	t[24]=-0.12, p=0.91
<b>How confident do you feel in supporting a mum who is experiencing recurring intrusive thoughts about:</b>	<b>Control</b>	Not being a good enough mum	6.85(22.23)	7.89(1.98)	t[24]=-1.43, p=0.16
		Baby is not dressed well enough	7.03(2.15)	8.06(2.48)	t[23]=-1.08, p=0.29
	<b>OCD related</b>	Not properly washed/cleaned baby items	5.41(2.09)	7.50(2.52)	t[24]=-2.26, p=0.03*
	<b>intrusion</b>	Baby may not be safe	5.41(2.09)	7.50(2.52)	t[24]=-2.15, p=0.04*
		Harming their baby	3.94(2.20)	7.33(2.60)	t[24]=-3.52, p=0.002**

\*Significant at  $p < 0.05$  \*\* Significant at  $p < 0.01$  (Bonferoni corrected significance level)

A chi-square analysis showed no significant differences between groups 1 and 2 for pre-training responses for vignette diagnoses; for results see Table 3.2 and for full breakdown of responses see Table 5.16 in Appendix 23.

**Table 3.2:** Accuracy of pre-training responses in potential OCD diagnosis for each vignette compared between groups

	<b>HV Group 1</b>	<b>HV Group 2</b>	<b>Group Comparison</b>
<b>OCD Contamination</b>	13/14 (92.86%)	7/8 (87.50%)	$\chi^2[2]=0.37, p=0.83$
<b>OCD Harm</b>	0/12 (0%)	0/8 (0%)	$\chi^2[2]=2.79, p=0.25$
<b>PND</b>	15/15 (100%)	8/9 (88.88%)	$\chi^2[2]=2.94, p=0.23$
<b>Obscure Harm</b>	15/15 (100%)	9/9 (100%)	$\chi^2[1]=1.15, p=0.28$

There were also no pre-training differences in ratings of primary or secondary child safeguarding risks as examined by chi-square analyses, shown in Table 3.3.

**Table 3.3:** Pre-training ratings of primary and secondary risk for each of the vignettes compared be groups

	<b>Risk</b>	<b>HV Group 1</b>	<b>HV Group 2</b>	<b>Group Comparison</b>
<b>OCD</b>	Primary	16/16	8/8	n/a
<b>Contamination</b>	Secondary	6/16	6/8	$\chi^2[1]=3.00, p=0.08$
<b>OCD Harm</b>	Primary	12/16	7/8	$\chi^2[1]=0.51, p=0.48$
	Secondary	1/16	2/8	$\chi^2[1]=1.74, p=0.19$
<b>PND</b>	Primary	16/16	9/9	n/a
	Secondary	6/16	4/9	$\chi^2[1]=0.12, p=0.73$
<b>Obscure Harm</b>	Primary	14/16	8/9	$\chi^2[1]=0.01, p=0.92$
	Secondary	1/16	1/9	$\chi^2[1]=0.19, p=0.67$

Table 3.4 outlines how the tick-box questions on how a health visitor would respond to the mothers in the vignettes were grouped.

**Table 3.4:** Grouping of responses to mothers

<b>Helpfulness</b>	<b>Response to mother</b>
Likely to be helpful	Tell her lots of people have these kinds of thoughts
	Tell her lots of people find being a new mum difficult
Unlikely to be helpful	Tell her to try to stop thinking about it
	Advise her not to tell anyone
	Say that these thoughts are very worrying

This same grouping displayed in Table 3.4 will be applied in the main analysis for this variable. If a health visitor ticked any of the responses in each group, this is counted.

Analyses were not conducted for this question for the obscure harm vignette as the degree to which the responses might or might not be helpful could not be categorised in the same manner as for the other vignettes.

Comparisons of scores between group 1 health visitors and group 2 health visitors were not significant for any of the variables (as shown in Table 3.5).

**Table 3.5:** Pre-training group comparison between what health visitors would say to the women in the vignettes.

	<b>Response category</b>	<b>HV Group 1</b>	<b>HV Group 2</b>	<b>Group Comparison</b>
<b>OCD Contamination</b>	Likely to be helpful	15/16 (93.75%)	7/9 (77.78%)	$\chi^2[1]=1.39, p=0.24$
	Unlikely to be helpful	3/16 (18.75%)	4/9 (44.44%)	$\chi^2[1]=1.89, p=0.17$
<b>OCD Harm</b>	Likely to be helpful	12/17 (70.59%)	5/9 (55.56%)	$\chi^2[1]=0.59, p=0.44$
	Unlikely to be helpful	15/17 (88.24%)	7/9 (77.78%)	$\chi^2[1]=0.49, p=0.48$
<b>PND</b>	Likely to be helpful	16/16 (100%)	8/9 (88.89%)	$\chi^2[1]=1.85, p=0.17$
	Unlikely to be helpful	6/16 (37.50%)	2/9 (22.22%)	$\chi^2[1]=0.62, p=0.43$

From the twelve comparisons for the three scaled vignette questions, three of these found significant differences between the two health visitor groups (see Table 3.6).

However, none of the group comparisons were significant at the Bonferoni corrected significance level of 0.004.

Details of these significant (but not at the Bonferoni corrected significance level) group differences:

Two of these significant differences were in health visitor *confidence in offering helpful support*, one for the OCD contamination vignette ( $t[23]=-0.67$ ,  $p=0.010$ ) with group 2 health visitors scoring significantly higher ( $M=7.83$ ,  $SD=1.70$ ) than group 1 health visitors ( $M=5.28$ ,  $SD=2.56$ ) and one for PND ( $t[22]=-2.30$ ,  $p=0.03$ ) with group 2 health visitors scoring significantly higher ( $M=8.75$ ,  $SD=1.39$ ) than group 1 health visitors ( $M=7.03$ ,  $SD=1.87$ ). For these two vignettes health visitors in group 2 rated a greater level of confidence. There was also a significant difference between groups for likelihood to refer mother for an assessment of her mental health ( $t[24]=-2.24$ ,  $p=0.04$ ) with health visitors in group 2 scoring this significantly higher ( $M=67.22$ ,  $SD=40.55$ ) than health visitors in group 1 ( $M=38.53$ ,  $SD=25.11$ ). However, aside from likelihood to refer, as above these results were not considered likely to impact on mother scores between groups as the measure of confidence does not represent skill or knowledge level (for which there were not significant differences between groups).

**Table 3.6:** Comparison of pre-training scored responses for the vignettes

Vignette	Question	HV Group 1	HV Group 2	Group Comparisons
		Mean (s.d)	Mean (s.d)	
<b>OCD Contamination</b>	Likelihood to refer mother for an assessment of her mental health	38.53(25.11)	67.22(40.55)	t[24]=-2.24, p=0.04*
	How much do you think there is a child safeguarding concern?	17.50(17.70)	35.00(19.37)	t[23]=-2.00, p=0.06 <sup>1</sup>
	How confident do you feel in offering some helpful support?	5.28(2.56)	7.83(1.70)	t[23]=-0.67, p=0.01*
<b>OCD Harm</b>	Likelihood to refer mother for an assessment of her mental health	92.50(8.56)	94.44(8.82)	t[23]=0.89, p=0.38 <sup>1</sup>
	How much do you think there is a child safeguarding concern?	70.31(29.01)	77.50(18.32)	t[22]=-0.64, p=0.53
	How confident do you feel in offering some helpful support?	7.03(1.81)	7.89(1.83)	t[23]=-1.13, p=0.27

<b>PND</b>	Likelihood to refer mother for an assessment of her mental health	58.44(30.21)	75.56(35.04)	t[23]=-1.29, p=0.21
	How much do you think there is a child safeguarding concern?	18.38(17.63)	21.11(12.69)	t[23]=-0.66, p=0.51 <sup>1</sup>
	How confident do you feel in offering some helpful support?	7.03(1.87)	8.75(1.39)	t[22]=-2.30, p=0.03*
<b>Obscure Harm</b>	Likelihood to refer mother for an assessment of her mental health	95.00(15.49)	87.78(29.49)	t[23]=0.81, p=0.43
	How much do you think there is a child safeguarding concern?	88.75(20.62)	84.44(23.51)	t[23]=0.48, p=0.64
	How confident do you feel in offering some helpful support?	7.09(1.57)	7.78(2.22)	t[23]=-0.82, p=0.38

\*Significant at  $p < 0.05$

<sup>1</sup> group comparisons conducted on transformed scores



Overall few significant differences were found between the two health visitor groups except for some differences in confidence levels. Therefore the researcher can assume that pre-training both groups of health visitors had similar levels of knowledge and skills appropriate for pOCD and can conclude it would be unlikely that any health visitor group differences would have a significant impact on mother results.

## **Data Analysis**

Pre- and post-training comparisons were made for all health visitors (n=26).

**Analyses to Test Hypothesis 1:** Post pOCD training, health visitors would have an increased knowledge of the prevalence of intrusions and confidence in working with mothers experiencing them.

In order to test Hypothesis 1 a repeated measures mixed model ANOVA was conducted to examine the dependent variable of health visitor ratings of the prevalence of different pOCD related intrusions and control items in postnatal mothers. Following the ANOVA post-hoc paired t-tests were then used accordingly to investigate differences. T-tests were used to examine the differences pre- and post-training for the dependent variable of confidence in supporting a mum of a baby experiencing the stated intrusions or control thoughts. These t-tests were completed separately for group 1 and group 2 health visitors due to pre-training differences in confidence between the groups.

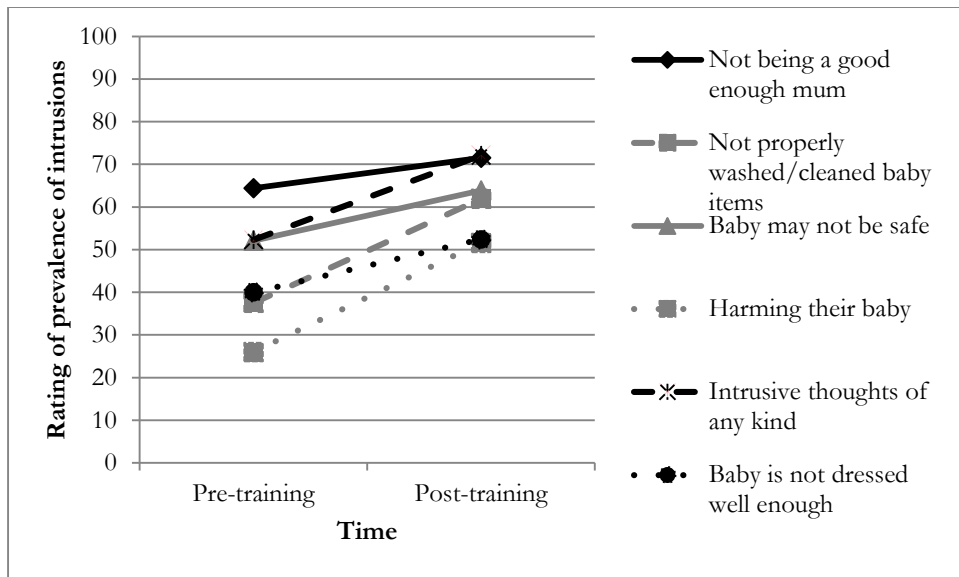
Pre-training scores were compared to post-training scores (pre-post) for ratings of the prevalence of OCD related intrusions and control items (intrusions) – the dependent variable was the percentage the health visitor rated for the prevalence of each intrusion

type. A pre-post (pre-training vs. post-training) x intrusion type (*not being a good enough mum, not properly washed/ cleaned baby items, baby may not be safe, harming their baby, intrusive thoughts of any kind, baby is not dressed well enough*) ANOVA (shown in Table 3.7) showed a significant main effect of pre-post ( $F[1]= 73.34, p<0.001$ ). There was also a significant main effect of intrusion ( $F[5]= 5.53, p<0.001$ ). The interaction of pre-post and intrusion type was significant ( $F[5]= 2.442 p=0.04$ ), indicating that the percentage rating of intrusion prevalence for the intrusion types differed between pre-training and post-training ratings. Scores can also be viewed in the line graph on Figure 3.0.

**Table 3.7:** Main effects and interaction for pre-and post-training health visitor ratings of the prevalence of mothers who experience the different specified intrusions

	Type III Sum of Squares	Results
<b>Main effect of pre-post</b>	21844.59	$F[1]=73.34, p<0.001^{**}$
<b>Main effect of intrusion</b>	30044.23	$F[5]= 5.53, p<0.001^{**}$
<b>Interaction</b>	3636.38	$F[5]= 2.442 p=0.04^*$

\*Significant at  $p < 0.05$  \*\*Significant at  $p < 0.005$



**Figure 3.0:** Pre-training and post-training ratings for percentage prevalence of specific intrusions

As the ANOVA showed significant results, post-hoc paired t-tests were used to compare pre- and post-training ratings of prevalence for each intrusion individually (shown in Table 3.8). Post-training ratings were significantly higher at the Bonferoni corrected significance level for *not properly washed/cleaned baby items* ( $t[25]=-6.13$ ,  $p<0.001$ ), *harming their baby* ( $t[24]=-5.57$ ,  $p<0.001$ ) and *intrusive thoughts of any kind* ( $t[25]=-3.90$ ,  $p=0.001$ ). *Baby may not be safe* also had a significant difference pre- and post-training ( $t(25)=2.83$ ,  $p<0.01$ ) but this was not at the Bonferoni corrected level of significance. Of key importance, the two control items were not significant *not being a good enough mum* ( $t[25]=-1.71$ ,  $p=0.10$ ) and *baby is not dressed well enough* ( $t[24]=-1.88$ ,  $p=0.07$ ). This demonstrates an increase in perceptions of how many mums experienced OCD related intrusions from pre training to post training, compared to control items (thoughts related to PND *not being a good enough mum* and nonclinical control item *baby is not dressed well enough*).

**Table 3.8:** Comparison of HV percentage ratings of the prevalence of mothers who experience the specified intrusions

Intrusion Type	Question	Pre-training	Post-training	Group Comparisons
		Mean (s.d)	Mean (s.d)	
<b>Control</b>	Not being a good enough mum	64.42(26.39)	71.54(22.84)	t[25]=-1.71, p=0.10
	Baby is not dressed well enough	40.00(26.38)	52.40(27.54)	t[24]=-1.88, p=0.07
<b>OCD related intrusion</b>	Not properly washed/cleaned baby items	37.50(24.55)	61.92(24.46)	t[25]=-6.13, p<0.001**
	Baby may not be safe	52.12(30.37)	63.85(26.73)	t[25]=2.83, p<0.01*
	Harming their baby	26.00(22.13)	51.60(28.68)	t=[24]=-5.57, p<0.001**
	Intrusive thoughts of any kind	52.31(31.73)	72.12(21.96)	t[25]=-3.90, p=0.001**

\*Significant at p = 0.05 \*\* Significant at p< 0.008 (Bonferoni corrected significance level)

T-tests were conducted to examine pre- and post-training differences for confidence in supporting mothers experiencing the OCD-related intrusions or control thoughts. Due to the significant pre-training differences in confidence between group 1 and group 2 health visitors these were conducted separately for each health visitor group.

As shown in Table 3.9, in group 1 health visitors, post-training confidence ratings were significantly higher for *not properly washed/cleaned baby items* ( $t[16]=3.63$ ,  $p=0.002$ ), *baby may not be safe* ( $t[16]=4.93$ ,  $p<0.001$ ) and *harming their baby* ( $t[16]=4.16$ ,  $p=0.001$ ), all significant at the Bonferoni corrected significance level. The control item of *baby is not dressed well enough* was not significantly different ( $t[15]=1.26$ ,  $p=0.228$ ), however the other control item *not being a good enough mum* was significantly higher post-training ( $t[16]=3.11$ ,  $p=0.007$ ) although this was not significant at the Bonferoni corrected level of significance.

However, in group 2 health visitors there were no significant differences in levels of confidence in two of the pOCD related intrusions (*not properly washed/cleaned baby items*:  $t[8]=1.961$ ,  $p=0.086$ ; *harming their baby*:  $t[8]=0.816$ ,  $p=0.438$ ). Confidence for one of the pOCD related intrusions (*baby may not be safe*) was significantly higher post-training, ( $t[8]=2.871$ ,  $p=0.021$ ), however not at the Bonferoni corrected level of significance. Neither of the control items had significant differences pre- to post-training in coincidence (*not being a good enough mum*:  $t[8]=0.896$ ,  $p=0.396$ ; *baby is not dressed well enough*:  $t[8]=0.806$ ,  $p=0.444$ ).

**Table 3.9:** Comparison of confidence ratings for supporting a mother who is experiencing intrusions and feels anxious

	<b>Intrusion Type</b>	<b>Question</b>	<b>Pre-training Mean (s.d)</b>	<b>Post-training Mean (s.d)</b>	<b>Group Comparisons</b>
<b>Group 1</b>	<b>Control</b>	Not being a good enough mum	6.85(1.64)	7.47(1.42)	t[16]=3.11, p=0.007*
<b>Health Visitors</b>		Baby is not dressed well enough	7.03(2.15)	7.53(1.69)	t[15]=1.26, p=0.228
	<b>OCD related</b>	Not properly washed/cleaned baby items	5.41(2.09)	6.76(1.93)	t[16]=3.63, p=0.002**
	<b>intrusion</b>	Baby may not be safe	5.41(2.06)	6.94(2.10)	t[16]=4.93, p<0.001**
		Harming their baby	3.94(2.20)	6.15(1.91)	t[16]=4.16, p=0.001**
<b>Group 2</b>	<b>Control</b>	Not being a good enough mum	7.89(1.98)	8.33(1.94)	t[8]=0.896, p=0.396
<b>Health Visitors</b>		Baby is not dressed well enough	8.06(2.48)	8.33(1.73)	t[8]=0.806, p=0.444
	<b>OCD related</b>	Not properly washed/cleaned baby items	7.50(2.52)	8.33(1.80)	t[8]=1.961, p=0.086
	<b>intrusion</b>	Baby may not be safe	7.39(2.55)	8.11(1.96)	t[8]=2.871, p=0.021*
		Harming their baby	7.33(2.60)	7.67(0.83)	t[8]=0.816, p=0.438

\*Significant at p = 0.05 \*\* Significant at p< 0.005 (Bonferoni corrected significance level)

These analyses have supported hypothesis 1 with group 1 health visitors: Following pOCD training health visitors had increased knowledge of the prevalence of intrusions and confidence in working with mothers experiencing them. However this hypothesis was only partly supported with group 2 health visitors.

**Analyses to Test Hypothesis 2:** Post pOCD training, health visitors would have an increased ability to identify potential pOCD and knowledge of the key skills in supporting this group.

In order to test Hypothesis 2 data were collected from questions on the video vignettes. The dependent variables were the ability to identify potential pOCD, as measured by their response of the potential diagnosis for the vignette, and the knowledge of the key skills in supporting this group as measured by ratings of the likelihood of referring the mother for an assessment of her mental health, child safeguarding rating, confidence in offering helpful support, specified risk (primary versus secondary) and what they would say to the mother.

The results below will be presented in the order of the six questions in the questionnaires (see Appendix 1). Repeated measures mixed model ANOVAs were used for the three scaled items: *how likely they would be to refer the mother for an assessment of her mental health, how much they think there is a child safeguarding concern with that mother and how confident they feel in offering some helpful support to the mother*. Post-hoc paired t-tests were then used accordingly. Chi-square tests were used for the remaining three items: to see whether the *potential diagnosis they would be referring the mother for* is accurate regarding OCD,

whether they name a primary risk of a secondary risk as *a possibility of a child safeguarding concern* and for *what they would say to the mother*.

### Question 1

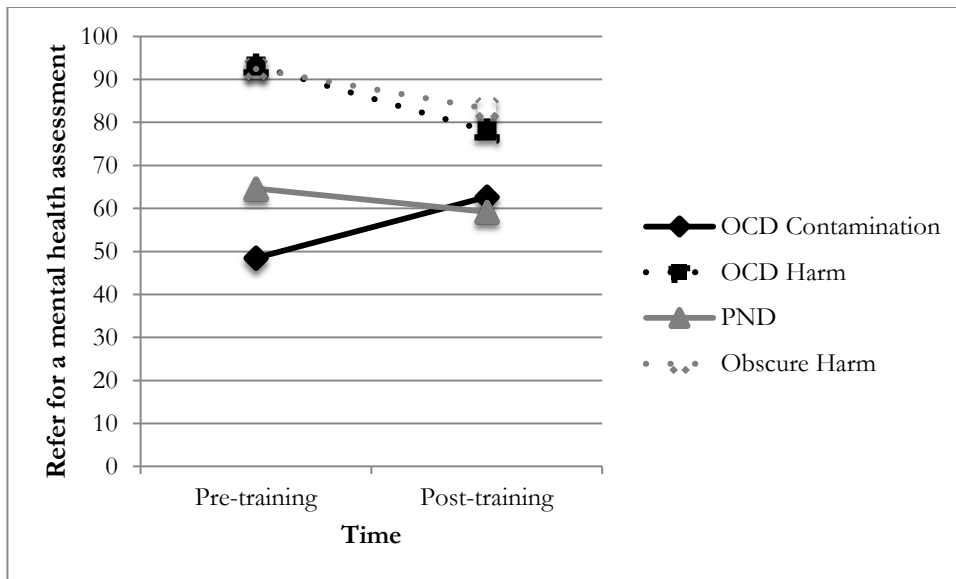
The study compared pre-training scores with post-training scores (pre-post) for *how likely health visitors would be to refer the mother for an assessment of her mental health* (referral). A pre-post (pre-training vs. post-training) x vignette (*OCD contamination, OCD harm, PND and obscure harm*) ANOVA (shown in Table 3.10) showed a significant main effect of pre-post ( $F[1]=24.13, p<0.001$ ). There was also a significant main effect of vignette ( $F[5]= 90.20 p<0.001$ ). The interaction of pre-post and vignette was significant ( $F[5]= 20.62, p<0.001$ ), indicating that the percentage rating of referral likelihood differed between pre-training and post-training ratings and between vignettes. The main effects and interaction can be viewed in the line graph in Figure 3.1.

**Table 3.10:** Main effects and interaction for pre-and post-training health visitor ratings of how likely they would be to refer the mother for an assessment of her mental health

	<b>Type III Sum of Squares</b>	<b>Results</b>
<b>Main effect of pre-post</b>	10202.18	$F[1]=24.13, p<0.001^{**}$
<b>Main effect of vignette</b>	204830.64	$F[5]= 90.20 p<0.001^{**}$
<b>Interaction</b>	26148.01	$F[5]= 20.62, p<0.001^{**}$

\*\*Significant at  $p = 0.005$





**Figure 3.1:** Pre-training and post-training ratings for how likely they would be to refer the mother for an assessment of her mental health

Following training the means for referral likelihood were lower for all four vignettes (see Table 3.11) with a significantly lower likelihood to refer for the OCD harm vignette ( $t[24]=-2.82, p<0.05$ ) post-training ( $M=78.08, SD=24.86$ ) then pre-training ( $M=93.20, SD=8.62$ ) at the Bonferoni corrected level of significance.

**Table 3.11:** How likely they would be to refer the mother for an assessment of her mental health

Question	Pre-training Mean (s.d)	Post-training Mean (s.d)	Group Comparisons
<b>OCD Contamination</b>	48.46(33.52)	62.69(37.24)	$t[25]=-1.81, p=0.08$
<b>OCD Harm</b>	93.20(8.62)	78.08(24.86)	$t[24]=-2.82, p=0.009^{**}$
<b>PND</b>	64.60(32.40)	59.20(34.96)	$t[24]=0.77, p=0.45$
<b>Obscure Harm</b>	92.40(21.27)	83.20(18.25)	$t[24]=1.83, p=0.08$

\*\* Significant at  $p < 0.013$  (Bonferoni corrected significance level)

## Question 2

Potential diagnoses were provided for each of the vignettes pre- and post-training, first Table 3.12 provides a breakdown of those stated.

**Table 3.12:** Comparison of potential diagnoses stated for each vignette compared between pre- and post-training

	Time	OCD	PND	Anxiety	Psychosis	Accurate regarding OCD
<b>OCD</b>	pre	20	4	7	0	20/22 (90.91%)
<b>Contamination</b>	post	23	3	2	0	23/23 (100%)
<b>OCD Harm</b>	pre	0	20	4	2	0/20 (0%)
	post	17	8	3	2	17/22 (77.27%)
<b>PND</b>	pre	1	24	4	1	23/24 (95.83%)
	post	3	19	2	0	17/20 (85%)
<b>Obscure Harm</b>	pre	0	24	1	4	24/24 (100%)
	post	10	16	3	1	11/21 (52.38%)

These were then compared for accuracy regarding potential OCD diagnosis between pre-and post-training for each vignette using chi-square analyses (results shown in Table 3.13. Accuracy regarding potential OCD diagnosis for the OCD contamination vignette improved to a 100% accuracy (23/23, compared to pre-training 20/22, 90.91%), although this improvement was not significant. Accuracy for potential OCD diagnosis for the OCD harm vignette was significantly higher at the Bonferoni corrected level of significance ( $\chi^2[2]$ ,  $p < 0.001$ ) post-training (17/22, 77.27%) than pre-training (0/20, 0%)

at which point no health visitors had considered OCD as a potential diagnosis. However, accuracy regarding potential OCD diagnosis for the obscure harm vignette was significantly lower at the Bonferoni corrected level of significance ( $\chi^2[2]=16.11$ ,  $p<0.001$ ) post-training (11/21, 52.38%) than pre-training (24/24, 100%), although fewer health visitors stated OCD as a potential diagnosis for this vignette (10) than in the OCD harm vignette (17). For the PND control item, more health visitors named OCD as a potential diagnosis post-training (3/20, 15%) than pre-training (1/24, 4.17%), but this was not significant ( $\chi^2[2]=3.90$ ,  $p=0.14$ ).

**Table 3.13:** Chi-square pre-training and post-training comparisons for accuracy of OCD as potential diagnosis

	Time 1	Time 2	Group Comparison
<b>OCD Contamination</b>	20/22 (90.91%)	23/23 (100%)	$\chi^2[2]=2.35$ , $p=0.31$
<b>OCD Harm</b>	0/20 (0%)	17/22 (77.27%)	$\chi^2[2]$ , $p<0.001^{**}$
<b>PND</b>	23/24 (95.83%)	17/20 (85%)	$\chi^2[2]=3.90$ , $p=0.14$
<b>Obscure Harm</b>	24/24 (100%)	11/21 (52.38%)	$\chi^2[2]=16.11$ , $p<0.001^{**}$

\*Significant at  $p = 0.05$  \*\* Significant at  $p < 0.013$  (Bonferoni corrected significance level)

An exploratory analysis was conducted to explore whether there was a difference between the number of health visitors who had named OCD as a potential diagnosis for the OCD harm vignette and the obscure harm vignette post-training. A chi-square found a significant difference ( $\chi^2[1]=4.04$   $p=0.04$ ), with significantly fewer health visitors naming OCD as a potential diagnosis following training for the obscure harm vignette (10/21, 47.62%) than the OCD harm vignette (17/22, 77.27%).

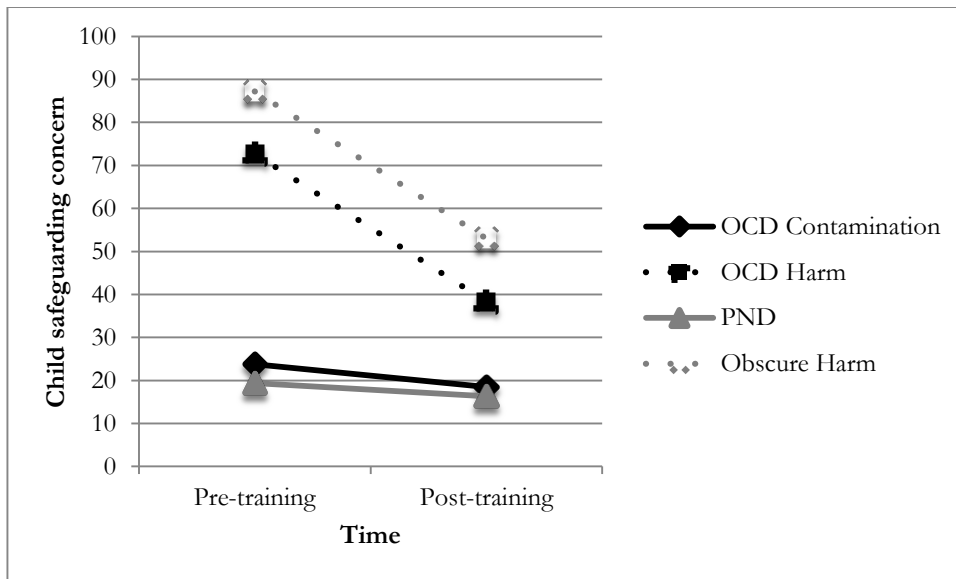
### Question 3

The study compared pre-training scores with post-training scores (pre-post) for *how much they think there is a child safeguarding concern with that mother* (safeguarding concern). A pre-post (pre-training vs. post-training) x vignette (*OCD contamination, OCD harm, PND and obscure harm*) ANOVA (shown in Table 3.14) showed a significant main effect of pre-post ( $F[1]=84.47, p<0.001$ ). There was also a significant main effect of vignette ( $F[5]= 114.98, p<0.001$ ). The interaction of pre-post and vignette was significant ( $F[5]= 25.88, p<0.001$ ), indicating that how much they thought there was a child safeguarding concern differed between pre-training and post-training ratings and between vignettes. The main effects and interaction can be viewed in the line graph in Figure 3.2.

**Table 3.14:** Main effects and interaction for pre-and post-training health visitor ratings of how much they thought there was a child safeguarding concern with that mother

	Type III Sum of Squares	Results
<b>Main effect of pre-post</b>	15164.44	$F[1]=84.47, p<0.001^{**}$
<b>Main effect of vignette</b>	179176.51	$F[5]= 114.98, p<0.001^{**}$
<b>Interaction</b>	13938.43	$F[5]= 25.88, p<0.001^{**}$

\*\*Significant at  $p = 0.005$



**Figure 3.2:** Pre-training and post-training ratings for how much they think there is a child safeguarding concern

Post-hoc paired t-tests were then conducted to compare child safeguarding concern ratings pre- and post-training for each of the vignettes (see Table 3.15). This found significantly different (at Bonferoni corrected level of significance) mean ratings for the OCD harm vignette ( $t[23]=6.77, p<0.001$ ) with a lower rating post-training ( $M=38.33, SD=29.25$ ) than pre-training ( $M=72.71, SD=25.75$ ). However safeguarding ratings for the obscure harm vignette were also significantly lower ( $t[24]=5.99, p<0.001$ ) post-training ( $M=53.00, SD=28.83$ ) than pre-training ( $M=87.20, SD=21.32$ ). T-tests did not find any significant pre-post-training differences for the OCD contamination vignette and PND control vignette.

**Table 3.15:** How much health visitors think there is a child safeguarding concern with that mother

Question	Pre-training	Post-training	Group Comparisons
	Mean (s.d)	Mean (s.d)	
<b>OCD Contamination</b>	23.80(19.86)	18.46(23.91)	t[24]=1.63, p=0.12
<b>OCD Harm</b>	72.71(25.75)	38.33(29.25)	t[23]=6.77, p<0.001**
<b>PND</b>	19.36(15.81)	16.35(19.00)	t[24]=1.04, p=0.31
<b>Obscure Harm</b>	87.20(21.32)	53.00(28.83)	t[24]=5.99, p<0.001**

\*\* Significant at p< 0.013 (Bonferoni corrected significance level)

#### Question 4

Chi-square analysis were used to compare pre-training and post-training responses for whether health visitors named a primary risk or a secondary risk as *a possibility of a child safeguarding concern* for each of the vignettes (shown in Table 3.16). Significantly fewer health visitors named a primary risk for the OCD harm vignette ( $\chi^2[1]=14.11, p<0.001$ ) post-training (6/25, 24.00%) then they did pre-training (19/24, 79.17%). The PND control item showed no changes pre- and post-training (both 0%) and the same pattern occurred with the OCD contamination vignette. However, there were significantly fewer health visitors stating a primary risk for the obscure harm vignette ( $\chi^2[1]=6.87, p<0.001$ ) post-training (13/25, 52.00%) than there were pre-training (22/24, 91.67%). Both of these were significant at the Bonferoni corrected level of significance.

No significant differences were found pre- and post-training for secondary risks on any of the vignettes.

**Table 3.16:** Pre-training and post-training comparisons of whether health visitors named primary or secondary risks for each of the vignettes

	<b>Risk</b>	<b>Pre- training</b>	<b>Post- training</b>	<b>Group Comparison</b>
<b>OCD Contamination</b>	Primary	0/24 (0%)	0/25 (0%)	n/a
	Secondary	11/24 (45.83%)	11/25 (44.00%)	$\chi^2[1]=0.02, p=0.90$
<b>OCD Harm</b>	Primary	19/24 (79.17%)	6/25 (24.00%)	$\chi^2[1]=14.11, p<0.001^{**}$
	Secondary	2/24 (8.33%)	6/24 (24.00%)	$\chi^2[1]=2.40, p=0.12$
<b>PND</b>	Primary	0/24 (0%)	0/25 (0%)	n/a
	Secondary	10/25 (40.00%)	10/25 (40.00%)	$\chi^2[1]=0.00, p=1.00$
<b>Obscure Harm</b>	Primary	22/24 (91.67%)	13/25 (52.00%)	$\chi^2[1]=6.87, p<0.001^{**}$
	Secondary	2/24 (8.33%)	6/25 (24.00%)	$\chi^2[1]=2.59, p=0.11$

\*\* Significant at  $p < 0.006$  (Bonferroni corrected significance level)

### Question 5

Chi-square analyses were also used to compare what health visitors would say to the mothers in the vignettes pre- and post-training (see Table 3.17). As with the earlier data

comparing health visitor groups, the obscure harm vignette was not included in this comparison. High rates for the likely to be helpful responses were found in all three vignettes post-training (OCD contamination 96.15%, OCD harm 100%, PND 96.15). There was a significant difference for the OCD harm vignette ( $\chi^2[1]=10.88$ ,  $p=0.001$ ) from 7/25 (28.00%) pre-training to 26/26 (100%) post-training at the Bonferoni corrected significance difference. Chi-square did not find a significant difference for this in the two other vignettes.

The OCD harm vignette also saw a significant reduction ( $\chi^2[1]=22.26$ ,  $p<0.001$ ) in unlikely to be helpful responses post-training (5/26, 8.85%) compared to pre-training (22/25, 88.00%). As did the OCD contamination vignette ( $\chi^2[1]=5.62$ ,  $p=0.02$ ) between pre-training (7/25, 28.00%) and post-training (1/26, 3.85%) and the PND vignette ( $\chi^2[1]=6.95$ ,  $p=0.01$ ) between pre-training (8/25, 32.00%) and post-training (1/26, 3.85%), although both at a lower significance level than for the OCD harm vignette.



**Table 3.17:** Pre-training group comparison between what health visitors would say to the women in the vignettes

	<b>Response category</b>	<b>Pre-training</b>	<b>Post-training</b>	<b>Group Comparison</b>
<b>OCD</b>	Likely to be helpful	22/25 (88.00%)	25/26 (96.15)	$\chi^2[1]=1.17, p=0.28$
	Unlikely to be helpful	7/25 (28.00%)	1/26 (3.85%)	$\chi^2[1]=5.62, p=0.02^*$
<b>OCD Harm</b>	Likely to be helpful	7/25 (28.00%)	26/26 (100%)	$\chi^2[1]=10.88, p=0.001^{**}$
	Unlikely to be helpful	22/25 (88.00%)	5/26 (8.85%)	$\chi^2[1]=22.26, p<0.001^{**}$
<b>PND</b>	Likely to be helpful	24/25 (96.00%)	25/26 (96.15)	$\chi^2[1]=0.00, p=0.97$
	Unlikely to be helpful	8/25 (32.00%)	1/26 (3.85%)	$\chi^2[1]=6.95, p=0.01^*$

\*Significant at  $p = 0.05$  \*\* Significant at  $p < 0.008$  (Bonferoni corrected significance level)

### Question 6

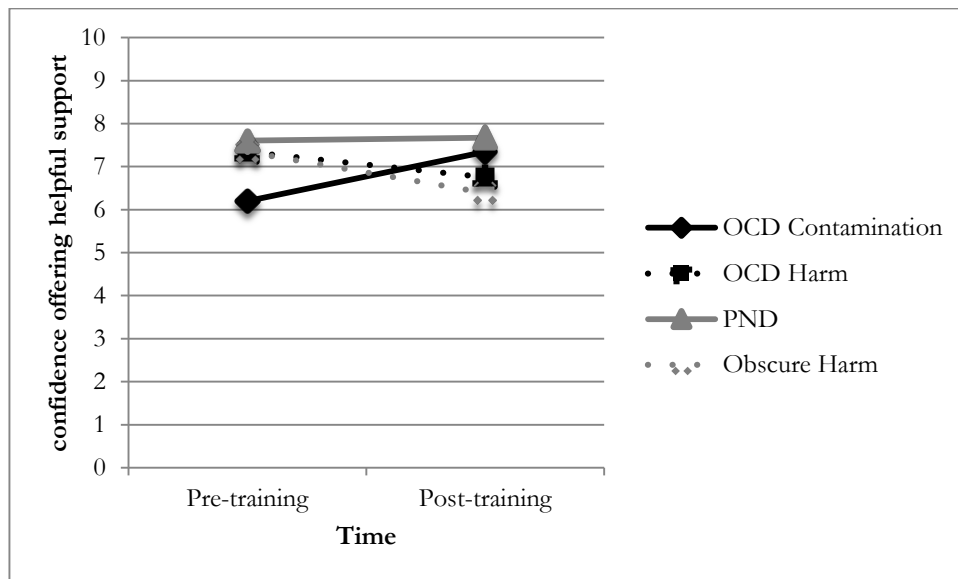
The study compared pre-training scores with post-training scores (pre-post) for *how confident they feel in offering some helpful support to the mother* (support). A pre-post (pre-training vs. post-training) x vignette (*OCD contamination, OCD harm, PND and obscure harm*) ANOVA (shown in Table 3.18) did not find a main effect of pre-post ( $F[1]=0.03, p=0.86$ ) or of vignette ( $F[5]= 0.21 p=0.89$ ). There was no interaction between pre-post

and vignette ( $F[5] = 0.81, p = 0.91$ ). This is also displayed in the line graph in Figure 3.3.

**Table 3.18:** Main effects and interaction for pre-and post-training health visitor ratings of how confident they feel in offering some helpful support to the mother

	Type III Sum of Squares	Results
Main effect of pre-post	2.23	$F[1] = 0.03, p = 0.86$
Main effect of vignette	51.27	$F[5] = 0.21, p = 0.89$
Interaction	37.87	$F[5] = 0.81, p = 0.91$

\*Significant at  $p = 0.05$  \*\*Significant at  $p = 0.005$



**Figure 3.3:** Pre-training and post-training ratings for how confident they feel in offering some helpful support to the mother

As the ANOVA did not have any significant findings for how confident health visitors felt in offering some helpful support to the mother, no post-hoc tests were conducted.

There is some evidence to suggest hypothesis 2 is supported. This will be discussed and placed in full context within the discussion.

## **Mother Data**

### **Treatment of Data**

The mother data was treated in the same way as conducted for variables in the health visitor data. Following winsorising of outliers, skewness and kurtosis were within the accepted bounds for all variables except the DASS-21 and its three subscales. A square root transformation was selected to enable parametric testing which would not lose as much information from the data as non-parametric tests. This transformation successfully moved skewness and kurtosis z scores into acceptable bounds so parametric tests could then be used for all mother data. For full details see Table 5.17-5.19 in Appendix 24.

### **Description of Participants**

Mother participants comprised two groups:

1. experimental group (n=51): those who had seen a health visitor who attended the pOCD training; and
2. control group (n=54): those who had seen a health visitor who had not attended pOCD training.

There was a 16.56% response rate from the 308 questionnaire packs sent to potential participants in the experimental group and a 18.49% response rate from the 292 questionnaire packs sent to potential participants in the control group; on average, from the 600 questionnaire packs posted, there was a 17.50% response rate.

No differences were found between the experimental and control groups in their age or the age of their babies (see Table 3.19 for group comparisons). This was important as the age of the baby and his/her developmental stage may have impacted on intrusion content (for example if a mother spent a long time to return a questionnaire a crawling baby may elicit different emotions and intrusions from a baby of eight weeks).

**Table 3.19:** Comparison of the mean age of mothers, mean age of babies and weeks since they last saw their health visitor

	<b>Control</b>	<b>Experimental</b>	<b>Group Comparisons</b>
	<b>Mean(s.d)</b>	<b>Mean(s.d)</b>	
Age of mother (years)	32.46(4.08)	33.04(4.67)	F[103]=-0.68, p=0.50
Age of baby (days)	63.24(14.13)	60.78(11.60)	F[103]=0.97, p=0.34

The duration of time since the mother last saw her health visitor was also examined as the length of time since they saw their health visitor may have had an impact on the study measures, particularly their memory of the appointment. Chi-square found no difference between groups in the time since they last saw their health visitor ( $\chi^2[3]=3.33$ ,  $p=0.34$ ). Full details of the observed and expected frequencies are available in Appendix 25 Table 5.20.

As ethnicity was found to be predominantly white-British (see Appendix 26 Table 5.21 for full descriptive data on ethnicity) comparisons were made between white and non-white-British demographic descriptions between the two trial groups. A chi-square analysis showed there were no significant differences between white-British and non-white-British descriptions between the two groups ( $\chi^2[1]=0.40, p=0.53$ ).

As the comparison of demographics of the mother participants did not show any differences between the two trial groups, any differences in scores on the study's measures were likely to have come from the intervention.

## **Data Analysis**

**Analyses to Test Hypothesis 3:** Mothers who have seen a trained health visitor (mothers in the experimental group), compared to mothers who have seen an untrained health visitor (mothers in the control group), would talk about intrusions more with their health visitor.

In order to test Hypothesis 3 participants responded with a 'yes' or a 'no' to two questions devised specifically for the study:

- *Did your Health Visitor talk to you about intrusions?* (question 1), and
- *Did you talk to your Health Visitor about your own experiences of intrusions?* (question 4).
- Results were also combined for whether a mother had responded 'yes' to either question, or 'no' to both.

These questions form the dependent variable for hypothesis 3.

Group comparisons were made using chi-square for which the results are displayed in Table 3.20.

**Table 3.20:** Rates of speaking to Health Visitors about intrusions or own intrusions compared between groups

Measure		Control	Experimental	Chi Square
Q1 Spoke to HV about intrusions	Yes	8/54 (14.81%)	13/51 (25.49%)	$\chi^2[1]=1.87, p=0.13$
	No	46/54 (85.16%)	38/51 (74.51%)	
Q4 Spoke to HV about own intrusions	Yes	5/54 (9.26%)	7/51 (13.73%)	$\chi^2[1]=0.52, p=0.34$
	No	49/54 (90.74%)	44/51 (86.27%)	
Yes to either Q1 or Q4	Yes	12/54 (22.22%)	16/51 (31.37%)	$\chi^2[1]=1.12, p=0.29$
	No	42/54 (77.78%)	35/51 (68.73%)	

Percentages for discussing intrusions with their health visitor for the experimental group were higher on both questions. However, a chi-square analysis revealed that these were not significantly different between groups for question 1 ( $\chi^2[1]=1.87, p=0.13$ ), question 4 ( $\chi^2[1]=0.52, p=0.34$ ) or yes to either questions 1 or 4 ( $\chi^2[1]=1.12, p=0.29$ ).

Mothers were also asked about their inter-personal perceptions of talking to their health visitor about intrusions in general or their own intrusions:

- *How easy would it be/was it to talk to HV about intrusions they were experiencing (question 2), and*
- *Likelihood of talking to HV about intrusions they were experiencing (question 3)*

These two measures were compared between groups using t-tests with results outlined in Table 3.21. Note that a score of 0 would be ideal for question 2 but a score of 10 would be ideal for question 3 (as outlined in the Table).

**Table 3.21:** Comparison of inter-personal perceptions of talking to health visitors

Measure	Control Mean (s.d)	Experimental Mean (s.d)	Group Comparisons
Q2 How easy would it be/was it to talk to HV about intrusions they were experiencing <i>0 = extremely easy</i> <i>10 = extremely difficult</i>	3.01(2.41)	3.60(2.32)	t[102]=1.27, p=0.21
Q3 Likelihood of talking to HV about intrusions they were experiencing <i>0 = I would definitely not</i> <i>10 = I would definitely</i>	6.90(2.31)	6.40(2.66)	t[102]=1.09, p=0.28

For question 2, the between groups t-test revealed no significant differences between the experimental group (M=3.60, SD=2.32) and the control group (M=3.01, SD=2.41) for how easy would it be, or was, to talk to their health visitor about intrusions they were experiencing (t[102]=-1.27, p=0.21). The t-test for question 3 also found no significant differences between the experimental group (M=6.40, SD=2.66) and the control group

( $M=6.90$ ,  $SD=2.31$ ) for ratings of the likelihood of talking to their health visitor about intrusions they were experiencing ( $t[102]=1.09$ ,  $p=0.28$ ).

Hypothesis 3 was therefore not supported, mothers who saw a pOCD trained health visitor did not report discussing intrusions with their health visitor more than those in the control group, nor did mothers rate it as significantly easier or more likely to talk to their health visitor about intrusions.

**Analyses to Test Hypothesis 4:** Mothers who have seen a trained health visitor (mothers in the experimental group), compared to mothers who have seen an untrained health visitor (mothers in the control group), would be less bothered following intrusions and spend less time completing compulsions.

In order to test Hypothesis 4 first the number of intrusions and compulsions reported by mothers were compared between groups using t-tests. Although the number of intrusions experienced in the experimental group ( $M=2.67$ ,  $SD=1.79$ ) were lower than in the control group ( $M=3.09$ ,  $SD=1.64$ ), as expected, this was not significant. Similarly, although the number of compulsions experienced in the experimental group ( $M=2.80$ ,  $SD=1.65$ ) were lower than in the control group ( $M=3.22$ ,  $SD=1.53$ ) this was not significant. As these analyses were non-significant, individual intrusions were not compared between groups.

Between groups t-tests were conducted to compare scores between groups on the two other questions of the PTBC:



- *How bothered have you been by any of the following intrusive thoughts about your baby?* (a list of intrusions follows with a rating of 0-100 for each)
- *What percentage of the time have you done any of the following when you experience intrusions?* (a list of compulsions follows with a rating of 0-100)

The scores for these components of the PTBC form the dependent variables for hypothesis 4.

These are reported in Table 3.22.

**Table 3.22:** Comparison of mean scores for the two PTBC subscales: rating of how bothered mothers were by intrusions experienced and percentage of time spent completing compulsions following an intrusion

Measure	Control	Experimental	Group Comparisons
	Mean (s.d)	Mean (s.d)	
<b>Bothered by intrusions</b>	237.22(115.05)	184.71(151.78)	t[94.04]=2.09, p=0.04*
<b>Time completing compulsions</b>	236.30(130.91)	203.33(171.21)	t[92.54]=0.10, p=0.32

\*Significant at p = 0.05

Group comparisons found the ratings of being bothered by intrusions were significantly lower (t[94.04]=2.09, p=0.05) in the experimental group (M=184.71, SD=151.78) than in the control group (M=237.22, SD=115.05). This supports this element of hypothesis 4. However, although the occurrence of completing compulsions following an intrusion was lower in the experimental group (M=203.33, SD=171.21) than in the control group

( $M=236.30$ ,  $SD=130.91$ ), this was not found to be significantly different ( $t[92.54]=0.10$ ,  $p=0.32$ ).

Following the significant difference between groups for how bothered mothers were about intrusions, between groups t-tests were conducted to compare how bothered mothers were by each of the individual intrusions as listed in the PTBC. All participants who provided a rating for the ‘other’ category for either intrusions or compulsions were asked to give descriptive detail of the experience. A summary of these is provided in Appendix 27, Table 5.22. Results are shown in Table 3.23.

**Table 3.23:** Rating of how bothered mothers were by specific intrusions experienced

	<b>Control</b>	<b>Experimental</b>	<b>Group Comparisons</b>
	<b>mean (s.d.)</b>	<b>mean (s.d.)</b>	
Baby Suffocating	30.93(28.70)	29.22(30.97)	$t[103]=0.29$ , $p=0.77$
Sexual Thoughts About Baby	2.41(7.76)	0.20(1.40)	$t[56.65]=2.00$ , $p=0.04^*$
Baby may get contaminated	10.37(20.65)	10.78(25.05)	$t[103]=0.09$ , $p=0.93$
Sudden Infant Death Syndrome (SIDS)	54.44(27.38)	41.96(30.99)	$t[103]=2.19$ , $p=0.03^*$
Baby Having an accident	40.74(26.48)	30.39(29.46)	$t[103]=1.90$ , $p=0.06$
Intentionally Harming the baby	5.93(17.21)	2.94(9.23)	$t[82.11]=1.17$ , $p=0.27$
Losing the baby somewhere	35.19(31.35)	27.65(32.72)	$t[103]=1.21$ , $p=0.23$
Illness	40.74(27.94)	33.92(33.23)	$t[97.89]=1.14$ , $p=0.26$
Magical Thinking	11.11(26.61)	3.73(13.85)	$t[80.73]=1.80$ , $p=0.08$
Other	5.00(19.60)	2.55(11.81)	$t[103]=0.77$ , $p=0.44$

\*Significant at  $p = 0.05$

Mean scores from Table 3.23 were lower in the experimental group for all items but one (*baby may get contaminated*) and were significantly lower on two items *sexual thoughts about baby* and *Sudden Infant Death Syndrome (SIDS)* although not at the Bonferoni corrected level of significance of  $p < 0.005$ . It therefore appears that it was not differences in any particular intrusions that caused the overall significant difference shown in Table 3.22, but the overall lower scores for each of them.

**Analyses to Test Hypothesis 5:** Mothers who have seen a trained health visitor (mothers in the experimental group), compared to mothers who have seen an untrained health visitor (mothers in the control group), would have fewer symptoms of depression, anxiety and stress.

In order to test Hypothesis 5 the transformed DASS-21 scores of the experimental and control groups were compared using t-tests (see Table 5.23 in Appendix 28). The DASS-21 scores formed the dependent variable for hypothesis 5. Group comparisons showed only a small difference between the control group ( $M=7.39$ ,  $SD=6.30$ ) and experimental group ( $M=7.41$ ,  $SD=5.43$ ) and t-test was found to be non-significant ( $t[103]=-0.24$ ,  $p=0.81$ ) and therefore hypothesis 5 was not supported.

### **Additional Data**

The data on intrusions can be compared to the results in the Abramowitz et al. (2003) study (shown in Table 3.24). Similar rates were found in this study to their results for

*baby suffocating* and *sexual thoughts about baby*. The present study found higher results for *baby having an accident, losing the baby, illness* and *baby may get contaminated* than in the Abramowitz et al (2003) study but prevalence for *intentionally harming the baby* were lower in the present study.

**Table 3.24:** Prevalence of intrusions from the PTBC in both mother groups

Intrusion	Mothers experiencing the intrusion Count (%)	Comparison with Abramowitz et al. 2003
Baby suffocating	43/105 (40.95%)	44.4%
Sexual thoughts about baby	3/105 (2.86%)	2.2%
Baby may get contaminated	12/105 (11.43%)	0%
Magical thinking about bad things happening to the baby	8/105 (7.62%)	n/a
Illness	54/105 (51.43%)	3.3%
Losing the baby	47/105 (44.76%)	7.5%
Intentionally harming the baby	3/105 (2.860%)	21.1%
Baby having an accident	55/105 (52.38%)	26.7%
Cot death	72/105 (68.57%)	n/a
Other	10/105 (9.52%)	n/a

There is not a study so directly comparable for the prevalence of compulsions but some could be compared with Zambaldi et al.'s (2009) study (see Table 3.25). Results for *cleaning* were similar, prevalence for *performing rituals* were lower in the present study than in Zambaldi et al.'s (2009) study, but results for *checking* were much higher.

**Table 3.25:** Prevalence of compulsions from the PTBC in both mother groups

<b>Compulsion</b>	<b>Mothers experiencing Count (%)</b>	<b>Comparison with Zambaldi et al. (2009)</b>
Self-reassurance	72/105 (68.57%)	n/a
Checking	79/105 (75.24%)	23.6%
Behavioural distraction (trying to do something else)	18/105 (17.14%)	n/a
Cognitive distraction (trying to think about something else)	32/105 (30.48%)	n/a
Perform a ritual (e.g. counting, tapping or straightening)	2/105 (1.90%)	8.0%
Seek reassurance from others	60/105 (57.14%)	n/a
Seek social support in general	17/105 (16.19%)	n/a
Religious prayer	15/105 (14.29%)	n/a
Cleaning	16/105 (15.24%)	17.6%
Avoidance	6/105 (5.71%)	n/a
Other	3/105 (2.86%)	n/a

## DISCUSSION

### Overview

Health visitors attended a ninety-minute training session in pOCD. Mothers who saw these health visitors were compared to mothers who saw health visitors who had not received this training, forming an experimental group and a control group respectively. Data was collected from mothers via postal questionnaires. Pre and post-training health visitor data, also collected via questionnaires, found increased consideration of pOCD as a diagnosis and awareness of different presentation types of pOCD. Following pOCD training, more health visitors said they would respond with responses classified as likely to be helpful. In mother participants, results from the PTBC for how bothered mothers were by the intrusions they experienced were significantly lower in the experimental group. The questionnaire was not able to detect the mechanism for this lower result in the experimental group. There was no significant difference between groups in time spent completing compulsions or in symptoms of depression, anxiety and stress.

Within this discussion each hypothesis will be summarised and later contextualised. The results are considered in relation to the cognitive-behavioural model of OCD along with other literature and clinical implications. A critical review of the study is provided as well as suggestions for future research.

## Summary of Results - Health Visitors

Hypothesis 1 proposed that, following pOCD training, health visitors would have increased knowledge of the prevalence of intrusions and confidence in working with mothers experiencing them. From the pre-training and post-training ratings of prevalence, all four OCD-related intrusion-types were all rated significantly higher post-training, whereas the two control items were not significantly different. The fact that the control items did not change demonstrates that this effect was specific to increased awareness of OCD-related intrusion types and not that health visitors were rating all thoughts as more prevalent.

In group 1 health visitors, confidence ratings for supporting a mother experiencing each of the OCD related intrusion-types were significantly raised post-training. Confidence for one control item was also significantly higher (*not being a good enough mum*) but not at the Bonferoni corrected level of significance (which p values for the OCD related intrusion-types did meet); the other control item was not significantly different (*baby is not dressed well enough*). However, in group 2 health visitors only one of the intrusions had significantly higher self-ratings of confidence but not at the Bonferoni corrected level of significance. This may be explained due to the significantly higher self-ratings of confidence pre-training as compared to group 1 health visitors pre-training ratings.

Hypothesis 2 proposed that, following pOCD training, health visitors would have increased ability to identify potential pOCD and knowledge of the key skills in supporting this group. This was assessed using five questions on each of the four carefully designed vignettes.

Accuracy regarding *potential OCD diagnosis* for the OCD contamination vignette improved to 100% accuracy post-training. Accuracy of potential OCD diagnosis for the OCD harm vignette was significantly higher post-training than pre-training, at which point none of the health visitors had considered OCD as a potential diagnosis. Chi-square testing found that accuracy regarding potential diagnosis for the obscure harm vignette (which was not intended to be consistent with a diagnosis of OCD) was significantly lower post-training, such that more health visitors also stated that OCD was a potential diagnosis for this vignette post training than had pre training. However, significantly fewer health visitors stated OCD as a potential diagnosis for this obscure harm vignette than in the OCD harm vignette. For the PND control vignette, there was no significant change. Overall this is supportive of this element of the hypothesis and needs to be contextualised with the final validation stage for the obscure harm vignette.

Four questions were asked regarding health visitor knowledge of key skills in supporting women with pOCD. Post-training, mean scores for referral likelihood were lower for all four vignettes but only significantly lower for the OCD harm vignette. Next, comparisons found significantly lower child safeguarding concern post-training for the OCD harm vignette. However safeguarding ratings for the obscure harm vignette were also significantly lower. Comparisons did not find significantly different ratings pre-and post-training for the other two vignettes. Significantly fewer health visitors named a



primary risk for the OCD harm vignette post-training than they did pre-training. However, as for safeguarding rating, there was also a significant difference for the obscure harm vignette (here lower for naming primary safeguarding concerns). There were no significant differences for the OCD contamination and the PND vignettes. There were no significant differences for the number of secondary risk child safeguarding concerns named for any of the vignettes.

Post-training, significantly more *likely to be helpful* responses were ticked for the OCD harm vignette. No significant differences were found for the PND and OCD contamination vignettes on this variable. There was a significant reduction post-training in how many health visitors stated that they would respond in a way that was identified by researchers as *unlikely to be helpful* for the OCD harm vignette and for the OCD contamination vignette. There was also a significant reduction for the PND vignette, although at a lower significance level.

In addition, confidence was also assessed for each of the vignettes pre- and post-training. Analysis showed no main effects or interaction between pre-post training and ratings for how confident the health visitors felt in offering helpful support to the mother in the vignette. Overall hypothesis 2 was supported but requires further discussion below.

### **Further Discussion of Hypotheses – Health Visitors**

Health visitors rated the prevalence of a range of OCD related intrusions as significantly higher post-training. Training highlighted that such thoughts/images/impulses are a

normal experience and therefore of high prevalence. Although their mean scores do not identically match the results of other studies (e.g. Zambaldi et al., 2009 and Abramowitz et al., 2003a) they show clear consideration of intrusions as a normal experience of postnatal mothers. The significant increase in confidence supporting a mother experiencing thoughts of *not being a good enough mum* control item (for group 1 health visitors) could be a broader result of training having helped health visitors feel more confident in general skills related to distress, however this was not at the Bonferoni corrected level of significance, which the OCD-related intrusions were.

The improved accuracy of OCD diagnosis appears to represent an important increase in awareness. With the more typically recognised OCD presentation (OCD contamination) recognition of potential diagnosis increased to 100%. Recognition of OCD as a potential diagnosis for OCD harm was initially at 0%, demonstrating none of the health visitors viewed this as a possibility. A significant rise to 77.27% may indicate that such a presentation would be more likely to be considered if health visitors have had training in pOCD, particularly with peer supervision and informal consultation with colleagues supporting assessments (if fellow team members have attended pOCD training, as opposed to a champion based training design).

The significantly lower referral rate for the OCD harm vignette post-training may represent health visitors feeling more equipped to conduct further assessment themselves. They may feel more able to distinguish whether the mother is experiencing normal infant related intrusions or whether the mother is experiencing pOCD at a clinical level.

The significant reduction of *unlikely to be helpful* responses for the PND vignette post-training is in keeping with the training helping health visitors think generally about responding to women in distress; some pOCD related skills are likely to be transferrable to other mental health presentations.

The non-significant main effect of confidence for the vignettes pre- and post-training may be explained by relatively high confidence levels prior to training (7.46 for OCD harm and 6.56 for OCD contamination). It may also be that training which discusses the multiple presentation types of pOCD, as well as risk, may have meant health visitors were exposed to a more complex picture of pOCD than their pre-training beliefs, thereby developing an understanding of potential complications that may leave them feeling less confident. This could be a positive outcome of the training, suggesting that this could encourage the seeking of closer supervision or case discussion if a health visitor feels less confident due to awareness of a more complicated picture of pOCD.

Overall, when compared to the PND vignette as a control item, the findings for the OCD harm vignette appear positive and supportive of the hypothesis. However, when compared to the obscure harm vignette significant pre-post training differences were also found for child safeguarding concern, number of named primary risks and accuracy of OCD diagnosis. It therefore appears that health visitors struggled to differentiate between these two vignettes and the possible safeguarding issues. The lower safeguarding ratings and number of named primary risks for the obscure harm vignette post-training could be explained by health visitors mistaking the potential diagnosis to be OCD. Indeed, at the final validation stage (see Table 2.5 in the Method), 2/9 mental health professionals named OCD as a potential diagnosis for the obscure harm vignette.

More so, at the vignette validation stage it is noteworthy that these mental health professionals were not answering the questions following pOCD training and therefore less likely to consider OCD as a potential diagnosis than health visitor participants in the study.

### **Summary of Results - Mothers**

Hypothesis 3 was not supported. Mothers who saw a pOCD trained health visitor (mothers in the experimental group) did not talk about intrusions more with their health visitor than mothers in the control group.

Hypothesis 4 proposed that mothers in the experimental group would be less bothered following intrusions and spend less time completing compulsions.. This was the key hypothesis of the study. Mothers in the experimental group did not experience fewer types of intrusions or compulsions (as per the literature, this is a normal aspect of human life and therefore no differences were expected between groups). But, mothers in the experimental group were less bothered by the intrusions they experienced. Interestingly, despite mothers in the experimental group being less bothered by their intrusions, they did not report spending significantly less time completing compulsions following intrusions.

Hypothesis 5 proposed that mothers in the experimental group would have fewer symptoms of depression, anxiety and stress compared to mothers in the control group.

As measured by the DASS-21, the group comparisons did not find any significant differences; therefore hypothesis 5 was not supported.

### **Further Discussion of Hypotheses –Mothers**

The non-significant finding for hypothesis 3 is interesting to consider against the significant finding from hypothesis 4. The study has not been able to measure the mechanism that influenced the significant result within hypothesis 4. It may be that some subtle normalising skills were being used by health visitors with the experimental group that mothers were not aware of. Health visitors would likely have not used the words ‘intrusion’ or ‘intrusive thoughts’ but could still have discussed the concept with mothers using more non-specific terms such as ‘thoughts’, ‘worries’ or ‘fears’. Indeed it could be that the terminology *intrusions* used within the questionnaire (although a definition for intrusions was provided) meant that the experience of discussion of intrusions was not identified by the questionnaire.

### **Results in Relation to The Cognitive Behavioural Model of OCD**

Intrusions and compulsions are the two key symptom areas in the diagnosis of OCD. However, it is now widely recognised that both intrusions and compulsions are experienced on a spectrum and form a part of normal human experience (Salkovskis, 1985; 1999). This study’s data on the prevalence of both intrusions and compulsions are consistent with this and previous postnatal research (Abramowitz et al. 2003;

Abramowitz et al., 2006; Abramowitz et al., 2007; Abramowitz et al., 2010 and Zambaldi et al., 2009). This also provides further support for a dimensional perspective on psychopathology as opposed to a categorical approach in understanding OCD (Abramowitz et al., 2003a), and that this is also supported in pOCD. Also consistent with previous literature is that mothers reported unique intrusions regarding their infant (Abramowitz et al., 2003a).

The cognitive-behavioural model of OCD (Salkovskis, 1985; 1999) states that we all have intrusions, but it is the way they are interpreted that puts people at risk of developing OCD. Most people are able to dismiss their unwanted thoughts as insignificant. Obsessional problems arise as a consequence of misinterpreting such thoughts as having implications for responsibility for harm or the prevention of harm. This is documented within perinatal populations (e.g. Fairbrother & Abramowitz 2007). Compulsions aim to reduce the distress or uncertainty caused by the intrusions. However, these strategies only produce a temporary reduction in distress, instead propelling the person's perception of responsibility by preventing the natural correction of mistaken beliefs about the dangerousness of intrusions (Abramowitz et al. 2003a). The training in this study aimed to equip health visitors with knowledge of the cognitive-behavioural model to inform the way they approach intrusions with the mothers they see i.e. to normalise intrusions and understand their potentially distressing nature. Training also emphasised the role of responsibility within the cognitive-behavioural model, a factor obviously apparent with mothers of young babies.

The finding that providing brief teaching on the central components of the model seemed to be effective is consistent with the model and with evidence based CBT. In

keeping with the model it was hypothesised that normalising of intrusions could help reduce how bothered mothers were by the intrusions they were experiencing – the study’s key hypothesis. Although this was supported, unfortunately the study did not detect how the knowledge and skills learnt in training were applied by the health visitors seeing mothers in the experimental group, which led to this result. As discussed above, it is possible that mechanisms were more subtle than talking explicitly about intrusions.

Also fitting with Salkovskis’ (1985, 1999) model was the second element of hypothesis 4, that time spent completing compulsions may reduce, as influenced by the normalising offered by health visitors. In standard CBT practice for OCD, normalising intrusions is typically one of the first steps of treatment (e.g. Veale, 2007), prior to implementing behavioural changes (i.e. reducing compulsions). Mechanisms used by CBT clinicians to help clients implement behavioural changes were not taught in the health visitor training due to the brief nature of the training, and the demand of additional clinical time this would require of the health visitors to apply. It may therefore be the case that, due to the study’s cross-sectional nature and limited extent of health visitor training, the study could not achieve a realistic evaluation of this outcome so soon after the health visitors’ appointments. It may also be the case that simply normalising is not enough to create a significant change in compulsions. It should also be noted that the study was conducted within a normal population, for whom time spent completing compulsions is not at an initially high enough level for any reduction to be realistically achievable or measurable.

## **Mental Health Training with Health Professionals**

The positive findings of the study echo the positive impact of training health visitors in other conditions such as depression, in which improved skills have been demonstrated, (e.g. Morrell et al., 2009; Appleby et al., 2003) and reductions in symptoms (e.g. Holden et al., 1989; Dennis, 2009). As in the present study, these studies also found increased identification of conditions (e.g. Morrell et al., 2009 and Appleby et al., 2003 for identification of depression). Symptom recognition was demonstrated with the vignette questions in this study; the study design did not extend to symptom recognition being examined in the clinical setting. Notably, this study investigates training in pOCD which has been granted considerably less attention than postnatal depression or psychosis, both in the literature in general but more specifically in effects of the provision of training (Abramowitz et al., 2003a). The findings provide support for the increased provision of mental health training covering many aspects of postnatal mental health problems.

## **Prevalence of Postnatal Intrusions and Compulsions**

The results from mothers have also provided further data on the prevalence of the different intrusions and compulsions experienced by mothers. As shown in Tables 3.24 and 3.25 in the Results section, these are comparable with results from other literature. Similar rates to the Abramowitz et al. (2003) study were found for intrusions about *baby suffocating* and *sexual thoughts about baby*. This study found higher prevalence for *baby having an accident, losing the baby, illness* and *baby may get contaminated* but prevalence for *intentionally harming the baby* were lower in the present study. Of course this lower result needs to be



placed in context with mothers often being reluctant to disclose the nature of intrusions featuring harm to their baby (Jennings et al., 1999; Newth & Rachman, 2001).

There is less literature examining the prevalence of postnatal compulsions (compared to that for intrusions) and this does not map easily to the data on compulsions gathered in this study via the PTBC. Compared to those examined by Zambaldi et al. (2009), rates for *cleaning* were similar, prevalence for *performing rituals* were lower in the present study, but rates for *checking* were much higher.

### **Symptoms of Depression, Anxiety and Stress**

New motherhood, or having further children, is one of the most important life transitions requiring the accurate detection and treatment of distress. The potential for untreated postnatal distress, in its various forms, to adversely impact the ongoing wellbeing of the mother and her infant has been widely emphasised (Miller et al., 2006). Studies have found comorbidity between OCD and depression (e.g. Williams and Koran (1997) or mood disorders (e.g. Forray et al. (2010)). Within this study improvements in overall wellbeing, as measured by the DASS-21, were not found to be significantly better in the experimental group, who had the reduction in how bothered they were by intrusions. This could be further investigated. It may be that, because this study's results were gathered from a normal population, at this level the experience of intrusions was not impacting significantly on symptoms of depression, anxiety or stress.

## **Clinical and Scientific Implications**

The study has found that, following only brief training in pOCD, health visitors (i) were more likely to consider pOCD as a potential diagnosis, (ii) were more aware of different presentations of pOCD, (iii) possessed an improved knowledge of intrusions central to pOCD presentations and within the normal population, (iv) had an improved understanding of primary risks associated with mothers with pOCD and (v) reported more appropriate responses to supporting a mother with pOCD. Although not specifically measured by the study, health visitors may also be more aware of how OCD is maintained via the CBT model, diagnostic overshadowing and the potential catastrophic consequences of health and social care professionals perceiving intrusions as a primary risk.

It was beyond the scope of this study to measure clinical recognition or referral rates by health visitors for pOCD. However, from the vignette data on the accuracy of potential OCD diagnosis, it could be postulated that the training may have reduced the danger of misinterpretation of pOCD symptoms that was seen in Challacombe and Wroe's (2013) study. Consequently, the catastrophic consequences of misinterpretation or lack of identification, such as interruption to mother-baby bonding as a result of social services involvement, may be avoided. Improved recognition should help prevent unduly intrusive risk assessment and the potentially harmful consequences of this such as the mother experiencing an increase of fear of the implications of her intrusions, distrust of health professionals and deterioration of wellbeing (Veale et al., 2009).

Due to the apparent lack of training in OCD in health visitor pre-qualification training,

accessible training for those already qualified could be encouraged. This could be included as part of health visitors continued professional development, as it did in the present study. Of course, results of this study should also work to encourage a roll-out of pOCD training at pre-qualification level. Noteworthy also is that the study measures were part of this duration, so, arguably, without their inclusion, training could be condensed to sixty minutes. This life stage for both mother and infant presents a clear rationale for quick identification and rapid treatment (Challacombe & Salkovskis, 2011).

There are also potential economic implications if this training has in fact improved detection and early referral for mothers with pOCD. The economic costs to the public sector resulting from mothers with postnatal anxiety problems are large (Bauer et al., 2014) and this economic argument should provide further support for improved training provision in postnatal anxiety disorders. This corresponds with the encouragement for wider provision of mental health training for health visitors (Hogg, 2013; Department of Health, 2014b).

The findings imply that early stage normalising is potentially helpful for mothers, even as an intervention on its own. Minimally, it seems the provision of training in pOCD for health visitors can help reduce distress regarding intrusions experienced by mothers at such a key time in their lives. This has not been documented before from such a brief provision of training. Potentially its impact may be even greater with some mothers, perhaps helping reduce onset of pOCD. Indeed it has been argued by Abramowitz et al. (2003a) that parents-to-be would likely benefit from being informed that the occurrence of unpleasant intrusions is common and not a cause for alarm. This opens up scope for further research into prevention programmes.

As previously discussed, support for the cognitive-behavioural model of OCD from the findings of the present study is one of its key scientific implications. This study also provides further evidence to support a high prevalence of intrusions and compulsions in the postnatal population, forming another valuable scientific implication.

### **Critical Review**

Overall few significant pre-training differences were found between the two health visitor groups except for differences in confidence levels. Content of training was kept confidential until the training day for both groups. Health visitors in both groups were informed that mothers they were seeing would receive a questionnaire about emotional wellbeing (not OCD specifically) in their information sheet. However, although mothers were advised in an information sheet that they could contact study personnel with any queries, the study could not control for any mothers potentially asking their health visitor questions related to their questionnaires. This may have meant some group 2 health visitors became aware of pOCD being the focus of the study. If health visitors were aware of the focus of training content of the research project this could have weakened the group comparisons.

Within the health visitors data, the main limitation was that many significant pre- to post-training differences were observed not only in the OCD harm vignette but also in the obscure harm vignette. As discussed previously, at the final vignette validation stage mental health professionals were considering OCD as a possible diagnosis for the

obscure harm vignette; it seems that the results for this vignette were linked to this. The obscure harm vignette cannot therefore be considered as a clear control item and requires further development to be more clearly distinguishable from the OCD harm vignette if it is to be used in future research. The significant findings with this vignette may not be wholly negative – wider consideration of OCD as a potential difficulty for postnatal women where it is not straightforward could enhance further assessment and increase identification. The superficial and short nature of the vignettes, although experimentally validated, must also be noted. Naturally, health visitors would be likely to want to ask mothers further assessment questions in all four vignettes, which was commented on by health visitors during the training.

A key limitation with the mother results was the study's inability to detect the mechanisms used by health visitors that were responsible for the significant difference between groups for how bothered mothers were by their intrusions. This would require further, specifically designed research. The study provided a definition of intrusions in the questionnaire, but simpler alternative wording, for example *worries* or *fears*, may have been clearer to mothers.

The study addresses an area of mental health that is not commonly focused on within health visitor training or in routine practice, despite its prevalence. Indeed, the information request sent to health visitor courses conducted during this study (discussed in the Method section) found minimal inclusion of training in OCD. Post-qualification training packages must acknowledge the time pressures that many clinicians are under. It was therefore important to evaluate whether a brief training format could have effective results. The duration of this training makes it feasible to be delivered on a wider scale.

This study demonstrated that positive clinical effects may be gained from a ninety-minute training session.

The study was designed to evaluate health visitor learning from training in addition to the mother data. The evaluation demonstrated that, pre-training, health visitors were not considering potential OCD in the OCD harm vignette at all. This provides a clear rationale for improved provision of training in the different forms in which pOCD may manifest i.e. the different intrusions and compulsions that may present. Additionally, as anticipated, greater learning was measured in the OCD harm vignette than the OCD contamination vignette, with the latter being better recognised pre-training.

Many studies into OCD have been criticised for lacking evaluation of overall wellbeing or quality of life, despite its documented impact (e.g. Ehntholt et al., 1999; Koran et al., 1996 and Norberg et al., 2008). Not only did this study focus on how bothered (potentially broadened to how distressed) mothers were by intrusions, it also sought to evaluate symptoms of depression, anxiety and stress through the inclusion of the DASS-21.

The area the study was conducted is a relatively affluent area (median full-time gross weekly earnings were £536.6 in the South East compared to £517.5 across the UK; Office for National Statistics, 2013). The mean age of mothers in the study (32.75 years) was slightly higher than the national average of 30.0 years (Office of National Statistics, 2014). However the ethnicity was similar to average across the rest of England and Wales, with 79.05% of mother participants classifying themselves as white British in the present study, compared to the 80.5% average in England and Wales (Office of National

Statistics, 2012). Generalisability across demographics must always be considered carefully. For example mothers from different cultures may find it more easy or difficult to discuss intrusions, or mothers who have previously had input from social services may be more reluctant to disclose or discuss intrusions. Similarly, health visitors working with mothers for whom English is a second language or with whom they are working with an interpreter may experience significant challenges in understanding and discussing the content of a mother's intrusions or conducting the normalising process itself.

A response bias must always be considered with questionnaire studies. It may be that some mothers would have under-reported certain intrusions due to their sensitive nature, or individuals not experiencing intrusions did not return the questionnaire thinking that it did not pertain to them. On the other hand, individuals who easily recognised intrusions or compulsions may have felt more motivated to return the questionnaire. Thus the rate of intrusions or compulsions in the postnatal population may be greater or lower than the study's findings.

The PTBC was chosen because it is specific to the intrusions and compulsions that may be experienced by mothers at this time. However, as of yet, it has not been extensively used. Other more widely used measures such as the Obsessive Compulsive Inventory (OCI; Foa et al., 2002) or the Yale-Brown Obsessive Compulsive Scale (YBOCS; Goodman et al., 1989a) could have been used within the study to measure OCD symptomology. However, it was considered advantageous to keep the questionnaire as short as possible to encourage responses and to prioritise focus on perinatal intrusions and compulsions. The DASS-21 was chosen as it has previously been used within postnatal populations (e.g. Miller et al., 2006 and Yelland, Sutherland & Brown, 2010). It

excludes somatic items such as sleep disturbance, lack of energy and poor concentration, which may not be valid markers with postnatal women. Again, alternative measures, for example the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) could have been chosen. In a review of anxiety measures in perinatal populations, Meades and Ayers (2011) concluded that the DASS-21 is successful in measuring multiple types of distress and shows appropriate content, although it remains to be validated against clinical interview in perinatal populations.

Statistically, there may be a limitation to using the 2.58 cut-off for the skewness z-scores with a population of 105 in the mother participants. However, as the sample size was only just over 100 this was considered acceptable.

Unfortunately only a small effect size was found in the study. If the power had been larger it is possible that differences between other variables could have been picked up, for example with the compulsions scores on the PTBC, which were lower in the experimental group but not significantly so.

The study involved multiple statistical analyses and the possibility for a potential type I error (a false positive) must be acknowledged. Bonferoni corrections were used where appropriate to account for this, however paradoxically this increases the risk of making a type II error (a false negative). Therefore, where appropriate, both levels of significance were outlined.



## **Suggestions for future research**

As discussed in the introduction, despite the wide use of normalising as a standard component of CBT treatment for OCD, there has been a lack of exploration of its use as a specific individual technique. Normalising was mentioned by all three ex-service users in the development interviews as something they had found helpful, or believe they would have found helpful, coming from their health visitor. Training for health professionals must be realistic regarding the clinician's available time to apply techniques or strategies and coordinate this with their expected role. Normalising appears to be an easy technique to be applied by many health professional groups provided with appropriate learning regarding intrusions (including their nature and their prevalence). This opens up two potential avenues for future research (1) how can the application of normalising be measured as a technique individually (2) would training in normalising for other health professional groups, such as midwives, also be helpful for mothers. If normalising early on is potentially helpful for mothers, further studies might examine whether application of normalising postnatally helps prevent the onset of clinical level OCD. Such research could be undertaken with health visitors delivering the intervention. Research could also evaluate the effects of normalisation through other means, such as targeted leaflets, online information or other brief interventions.

Further investigation of whether the provision of pOCD training would increase identification and referral rates of clinical level pOCD would be highly valuable. Such a study could also collect data on the skills used by health visitors with these mothers. Reactions to clinical-level pOCD may be a key positive impact of training that the present study was not able to measure. A study gathering longitudinal data could not

only evaluate effects with mothers, but also for the infant. Such a study could investigate attachment experiences and long-term psychological wellbeing of the child. This could provide further economic support for early recognition and referral for appropriate treatment.

This study of mothers was gender specific. However, following childbirth, an increased onset of OCD has also been found in fathers (Abramowitz et al., 2001). Of course, on the whole, fathers are far less in touch with services in the perinatal period, representing a methodological challenge to future research. This may leave fathers in danger of research neglect and any further research into their needs, perhaps also involving health visitors, should be encouraged. Repetition of the evaluation of pOCD training for health visitors or other health professionals should be encouraged in other geographical areas with other populations.

## **Conclusions**

The findings suggest that offering a short one-off pOCD teaching session to health visitors can improve their knowledge of pOCD and may have a helpful impact on the mothers they see. More specifically, the research demonstrated that training focused on the occurrence of intrusions and the CBT model of OCD had a positive impact on the wider consideration of pOCD as a potential diagnosis. The findings suggest that training may potentially aid recognition of pOCD, as OCD was better recognised in the video vignettes of the study. Clinically, this has the potential to prevent misinterpretation of risk and could facilitate appropriate referrals. Health visitors also chose responses

considered as likely to be helpful more frequently following training, suggesting potential for appropriate application clinically.

Findings also demonstrated that provision of such training impacted positively on postnatal mothers seen by these health visitors. It is postulated that such training may help health visitors develop strategies that they can use with mothers that help reduce the extent to which mothers are bothered by unpleasant intrusions.

The review of the literature demonstrates that training health professionals in recognition of pOCD warrants further attention. The provision of normalising potentially distressing intrusive thoughts may be able to be applied by them in routine healthcare however was not detected in this study.

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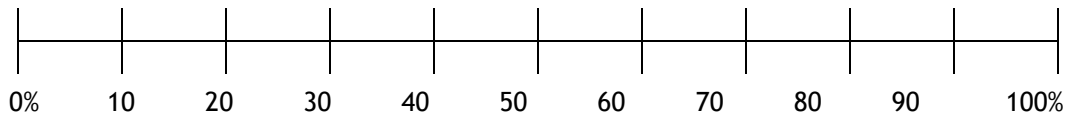
## APPENDICES

### Appendix 1: Health visitor questionnaire

#### Emotional Wellbeing Following Pregnancy Health Visitor - Training Questionnaire

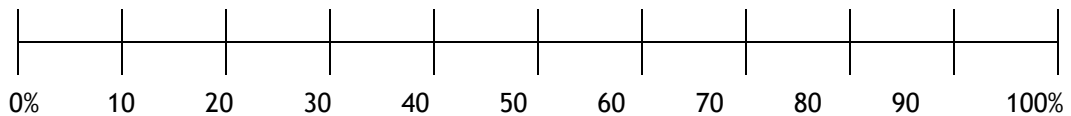
### Vignette 1 – ‘Penny’

How likely would you be to refer Penny for an assessment of her mental health?



If you had to refer Penny for a mental health assessment, what potential diagnosis would you be referring her for (if you think there is one)?

How much do you think there is a child safeguarding concern with Penny?

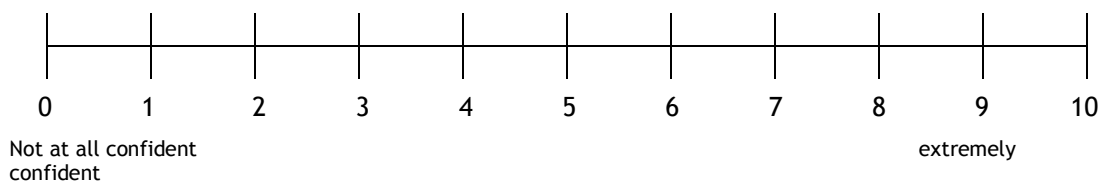


If you think there is a possibility that there is a child safeguarding concern, please state what the concern(s) may be.

What would you say to Penny? (Please tick box)

- |  |  |
|--|--|
| <input type="checkbox"/> Tell her to try to stop thinking about it | <input type="checkbox"/> Tell her not to pay any attention to thoughts like this |
| <input type="checkbox"/> Advise her not to tell anyone             | <input type="checkbox"/> Tell her lots of people have these kinds of thoughts    |
| <input type="checkbox"/> Say that these thoughts are very worrying | <input type="checkbox"/> Tell her lots of people find being a new mum difficult  |
| <input type="checkbox"/> Suggest that she changes her behaviours   |  |

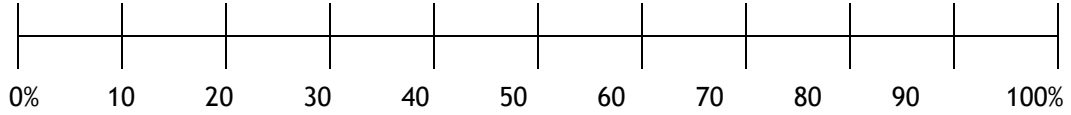
How confident do you feel in offering some helpful support to Penny regarding this issue?





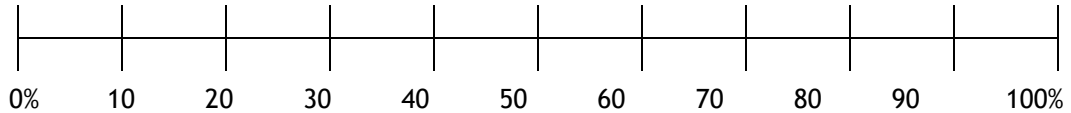
## Vignette 2 – ‘Jane’

How likely would you be to refer Jane for an assessment of her mental health?



If you had to refer Jane for a mental health assessment, what potential diagnosis would you be referring her for (if you think there is one)?

How much do you think there is a child safeguarding concern with Jane?

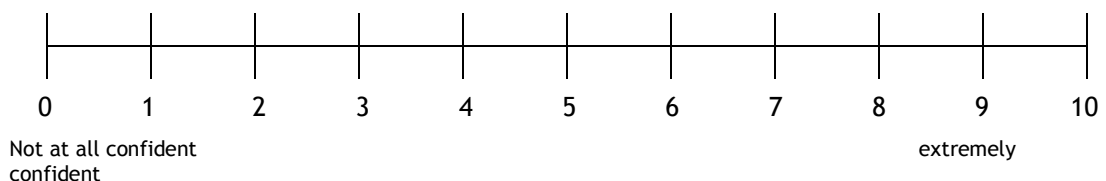


If you think there is a possibility that there is a child safeguarding concern, please state what the concern(s) may be.

What would you say to Jane? (Please tick box)

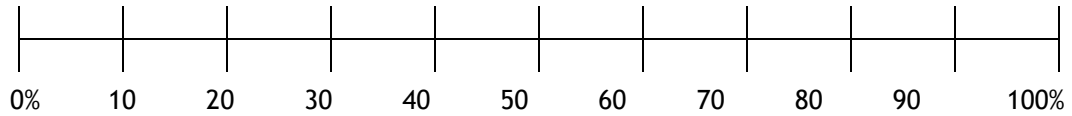
- |  |  |
|--|--|
| <input type="checkbox"/> Tell her to try to stop thinking about it | <input type="checkbox"/> Tell her not to pay any attention to thoughts like this |
| <input type="checkbox"/> Advise her not to tell anyone             | <input type="checkbox"/> Tell her lots of people have these kinds of thoughts    |
| <input type="checkbox"/> Say that these thoughts are very worrying | <input type="checkbox"/> Tell her lots of people find being a new mum difficult  |
| <input type="checkbox"/> Suggest that she changes her behaviours   |  |

How confident do you feel in offering some helpful support to Jane regarding this issue?



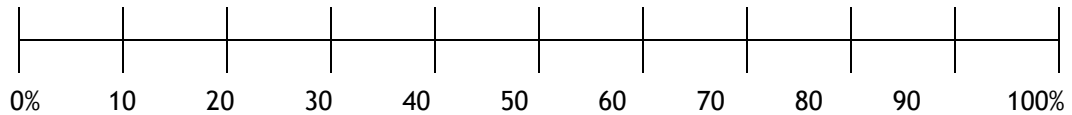
## Vignette 3 – ‘Sarah’

How likely would you be to refer Sarah for an assessment of her mental health?



If you had to refer Sarah for a mental health assessment, what potential diagnosis would you be referring her for (if you think there is one)?

How much do you think there is a child safeguarding concern with Sarah?

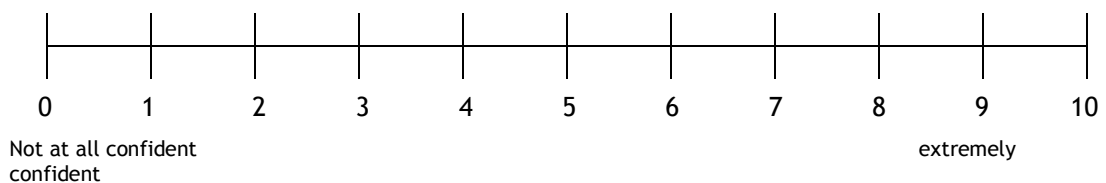


If you think there is a possibility that there is a child safeguarding concern, please state what the concern(s) may be.

What would you say to Sarah? (Please tick box)

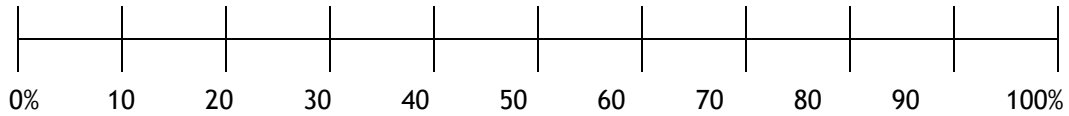
- |  |  |
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| <input type="checkbox"/> Tell her to try to stop thinking about it | <input type="checkbox"/> Tell her not to pay any attention to thoughts like this |
| <input type="checkbox"/> Advise her not to tell anyone             | <input type="checkbox"/> Tell her lots of people have these kinds of thoughts    |
| <input type="checkbox"/> Say that these thoughts are very worrying | <input type="checkbox"/> Tell her lots of people find being a new mum difficult  |
| <input type="checkbox"/> Suggest that she changes her behaviours   |  |

How confident do you feel in offering some helpful support to Sarah regarding this issue?



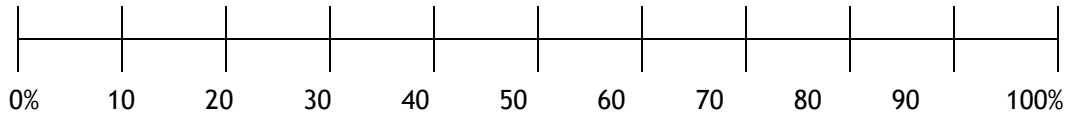
## Vignette 4 – ‘Rachel’

How likely would you be to refer Rachel for an assessment of her mental health?



If you had to refer Rachel for a mental health assessment, what potential diagnosis would you be referring her for (if you think there is one)?

How much do you think there is a child safeguarding concern with Rachel?

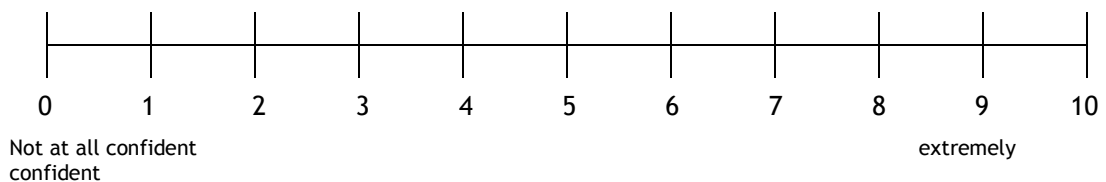


If you think there is a possibility that there is a child safeguarding concern, please state what the concern(s) may be.

What would you say to Rachel? (Please tick box)

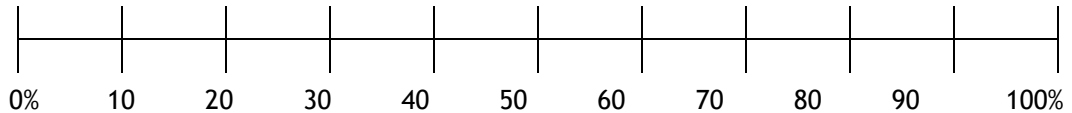
- |  |  |
|--|--|
| <input type="checkbox"/> Tell her to try to stop thinking about it | <input type="checkbox"/> Tell her not to pay any attention to thoughts like this |
| <input type="checkbox"/> Advise her not to tell anyone             | <input type="checkbox"/> Tell her lots of people have these kinds of thoughts    |
| <input type="checkbox"/> Say that these thoughts are very worrying | <input type="checkbox"/> Tell her lots of people find being a new mum difficult  |
| <input type="checkbox"/> Suggest that she changes her behaviours   |  |

How confident do you feel in offering some helpful support to Rachel regarding this issue?

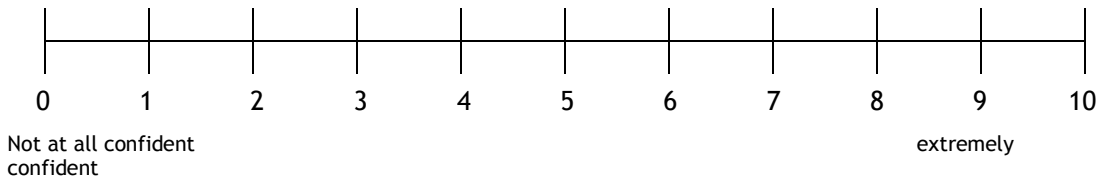


Some of the questions below ask about intrusive thoughts: *Intrusions are thoughts that suddenly enter your mind, may interrupt what you are thinking or doing and tend to recur on separate occasions. This may occur in the form of words, a mental image, or an impulse (a sudden urge to carry out some action).*

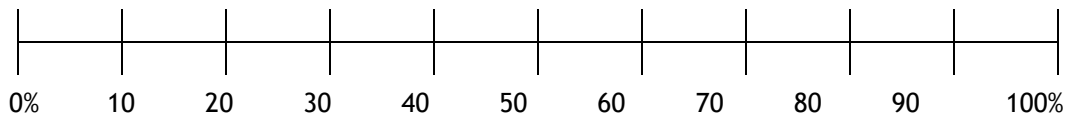
**1.** What percentage of mums of babies do you think experience recurring thoughts about not being a good enough mum?



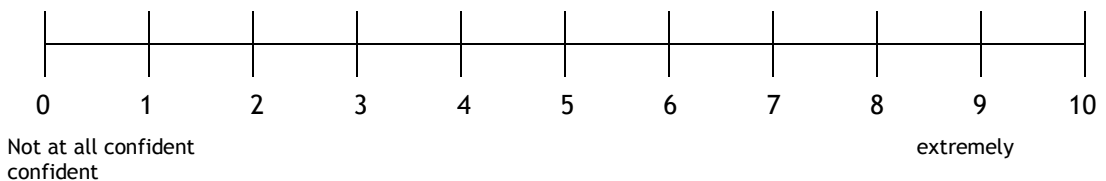
How confident do you feel in supporting a mum of a baby who reports that she experiencing recurring thoughts about not being a good enough mum and feels very low?



**2.** What percentage of mums of babies do you think experience recurring intrusive thoughts about not having properly washed/cleaned items to do with their baby, e.g. bottles, dummies?



How confident do you feel in supporting a mum of a baby who reports that she is experiencing recurring intrusive thoughts that she has not properly washed/cleaned items to do with their baby properly, e.g. bottles, dummies, and feels very anxious?

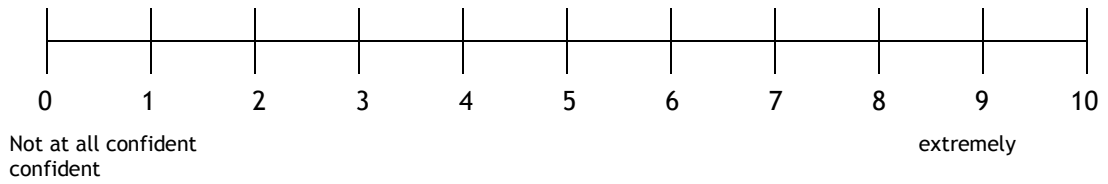


**3.** What percentage of mums of babies do you think experience recurring intrusive thoughts that the baby may not be safe, e.g. that the baby has stopped breathing, that the baby's bedroom windows or doors may not be properly locked and someone can break in?

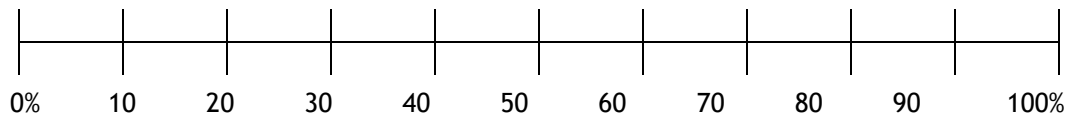


0% 10 20 30 40 50 60 70 80 90 100%

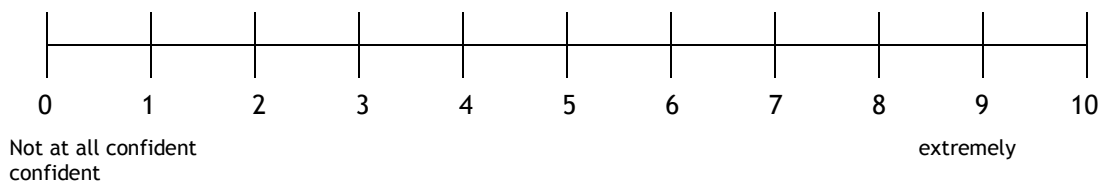
**How confident do you feel in supporting a mum of a baby who reports that she is experiencing recurring intrusive thoughts that the baby is not safe and feels very anxious?**



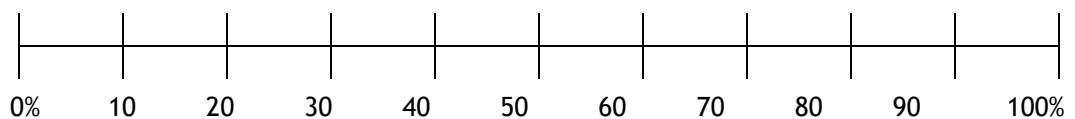
**4. What percentage of mums of babies do you think experience recurring intrusive thoughts about actively doing something that would harm their baby e.g. touch the baby inappropriately, do something that hurts the baby?**



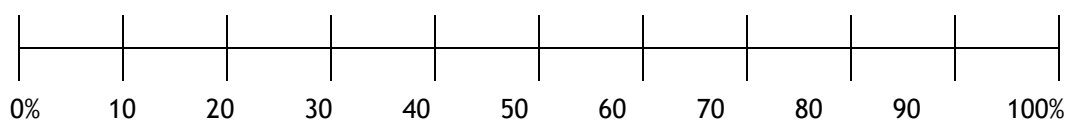
**How confident do you feel in supporting a mum of a baby who reports that she is experiencing recurring intrusive thoughts about actively doing something that would harm their baby e.g. touching the baby inappropriately, doing something that hurts the baby, and feels very anxious?**



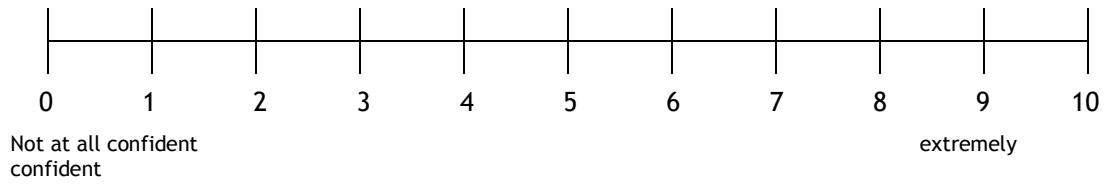
**5. What percentage of mums of babies do you think experience recurring intrusive thoughts (related to the baby) of any kind?**



**6. What percentage of mums of babies do you think experience recurring thoughts that their baby is not dressed well enough?**



How confident do you feel in supporting a mum of a baby who reports experience recurring thoughts that the baby is not dressed well enough?



Have you previously attended any training on Obsessive Compulsive Disorder?

- Yes       No

Your details so we can match you pre and post:

Initials: \_\_\_\_\_ Age: \_\_\_\_\_ Years in post since qualifying:  
\_\_\_\_\_

## **Appendix 2:** Description the vignette validation process

The original four vignettes are outlined below, each including identical questions from a health visitor (HV). The vignettes were presented in the order as below, mixing the order of pOCD and control vignettes.

*PND 'Jane'*

HV: "How are you coping generally?"

Mum: "Well ok. I've definitely noticed how much life's changed so much since I had the baby. I'm just feeling so overwhelmed."

HV: "What kind of thing do you mean?"

Mum: "I love my baby so much but I don't feel good enough to be her mum. I worry that I can't do it properly. Other mums seem to be coping better than me."

*OCD Contamination 'Penny':*

HV: "How are you coping generally?"

Mum: "I'm really worried about my baby getting ill. I worry a lot about the bottles. But I suppose it's good to wash bottles a lot to be sure"

HV: "What kind of thing do you mean?"

Mum: "I do like to make sure the bottles are clean enough. I don't like it when she is screaming for a bottle and I need to sterilise it. But I do have to be sure it's clean. Other mums seem to be coping better than me"

*OCD Harm 'Rachel':*

HV: "How are you coping generally?"

Mum: "I'm worried I shouldn't be a mum. I have some horrible thoughts. I do love my baby so much though. I would never want any harm to come to my baby."

HV: "What kind of thing do you mean?"

Mum: "Oh just horrible thoughts when I bathe the baby. People do hurt their babies sometimes and I hate thinking that mums can do that kind of stuff. I'm worried I'm not meant to be a mum. Other mums seem to be coping better than me."

*Obscure Harm 'Sarah':*

HV: "How are you coping generally?"

Mum: "Alright, but I do feel nervous when I'm with my baby."

HV: "What kind of thing do you mean?"

Mum: "Well I get a feeling that my baby's trying to tell me something but I don't know what this is. I feel really wary about this and nervous."

### Stage 1

Scripts were sent to six laypersons and five Trainee Clinical Psychologists with results outlined in Table 2.0. Throughout the validation section 'layperson' refers to persons who do not or have not previously worked in either health or social care or have any



training in any mental health related field, including psychology. At stage 1 only a basic question was asked about the scripts:

1. *What might you worry about if you were the health visitor - what the problem is? (i.e. a diagnosis/problem category, if you think there is one)*

In Tables 5.0-5.4 qualitative responses are summarised and placed within order of frequency and then alphabetised. Many responders provided multiple responses for qualitative questions, therefore all of the summarised responses are provided. In these tables the mean (m) is provided for quantitative questions.

**Table 5.0:** Stage 1 of vignette development

<b>Question</b>	1. What might you worry about if you were the health visitor - what the problem is?			
<b>Group (n)</b>	<b>PND</b>	<b>OCD contamination</b>	<b>OCD Harm</b>	<b>Obscure Harm</b>
<b>Lay- persons (6)</b>	Depression (3); Normal feeling (3)	OCD (4); Anxiety (2); Obsessing (1)	Depression (3); Anger (1); OCD (1); Psychosis (1)	Not sure (2); Anxiety (1); Depression (1); Not bonding (1)
<b>Trainee Clinical Psychol- ogists (5)</b>	Depression (4); Normal feelings (2); Anxiety (1); Attachment difficulties (1); Low self-esteem (1)	OCD (5); Anxiety (1); Normal feelings (1)	OCD/Intrusions (5); Depression (1)	Normal feelings (4); Anxiety (3); Psychosis/ Paranoid (2); OCD/Intrusions (1)

Stage 2

Between stages 1 and 2 the following script changes were made:

- PND was kept the same as this seemed relatively well recognised to be depression or low mood within the normal range.
- OCD Contamination had no major changes but the wording was slightly condensed.

- The last part of the OCD Harm was changed to; "*Oh just horrible thoughts when I bathe the baby. They make me very worried. People do hurt their babies sometimes and I hate thinking that mums can do that kind of stuff and I try not to think about it.*" This was to emphasise the egodystonic nature consistent with OCD symptoms.
- Obscure Harm was substantially changed. This vignette was originally devised to represent psychosis but was altered to represent a mother who was feeling stressed and unsupported with potential risk concerns. It was also feared that having a vignette that represented symptoms of psychosis could distract from pOCD training content. The new full vignette for stage 2 became:

HV: "How are you coping generally?"

Mum: "I'm worried I shouldn't be a mum. I have some bad thoughts when I feel stressed. I do love my baby but I think I need some more childcare support"

HV: "What kind of thing do you mean?"

Mum: "Sometimes I just can't cope and I have thoughts about wanting to hurt my baby when I feel frustrated with things at home."

At stage 2 requests were sent to five laypersons and five Trainee Clinical Psychologists.

The following questions were asked for each vignette, with responses summarised in

Table 5.1:

1. *How likely would you be to refer X to a mental health service? (on a scale of 0-100: 0=not at all, 100=definitely)*
2. *If you were choosing to refer X to a mental health service, what would you be referring her for?*

3. *How much do you think there is a safeguarding concern with X? (on a scale of 0-100: 0=not at all, 100=definitely)*

**Table 5.1:** Stage 2 of vignette development

1. How likely would you be to refer X to a mental health service?					
2. If you were choosing to refer X to a mental health service, what would you be referring her for?					
3. How much do you think there is a safeguarding concern with X?					
Group (n)	Question Number	PND	OCD contamination	OCD Harm	Obscure Harm
Laypersons (5)	<b>Q1 Mean (s.d)</b>	11.00 (15.16)	35.00 (27.84)	46.00 (29.03)	93.00 (13.04)
	<b>Q2</b>	No response (3); Anxiety (1); Depression (1)	OCD (3); Depression (1); Normal feelings (1)	Depression (1); Further assessment (1); No response (1); OCD (1); Schizophrenia (1)	Depression (2); Anxiety (1); Child safety (1); Further assessment(1); No response (1); Threat to baby (1)
	<b>Q3 Mean (s.d)</b>	11.00 (15.17)	23.00 (22.25)	46.00 (27.70)	89.00 (13.42)
Trainee Clinical psychologists (5)	<b>Q1 Mean (s.d)</b>	31.00 (34.21)	32.00 (17.54)	66.00 (23.02)	73.00 (29.50)
	<b>Q2</b>	Depression (4); Anxiety/worry (2); Self-esteem (1); Child safeguarding (1)	OCD (4); Anxiety (3)	OCD/intrusions (5); Anxiety (1)	Depression (3); Additional support (2); OCD (1); Stress (1)
	<b>Q3 Mean (s.d)</b>	7.00 (13.04)	10.00 (10.00)	15.00 (7.07)	60.00 (15.81)

### Stage 3

Between stages 2 and 3 the following script changes were made:

- “which gets me down” was added to the PND vignette to emphasise potential clinical level symptoms of depression (not those within the normal range).
- Part of the OCD Contamination vignette was changed from: “I worry” to “I keep thinking” to emphasise the repetitive nature of intrusive thoughts.
- OCD Harm was kept the same.
- The last part of the Obscure Harm vignette was changed to represent the harm as a feeling instead of a thought, which may be more plausible to be an intrusion:

Stage 2: “Sometimes I just can’t cope and feel frustrated with things at home so then I end up thinking about hurting my baby.

Stage 3: “Sometimes I just can’t cope and I have thoughts about wanting to hurt my baby when I feel frustrated with things at home.”

At stage 3 requests were sent to five laypersons and five Trainee Clinical Psychologists (see summary of responses in Table 5.2). The previous questions 1 and 3 were left unchanged, but questions 2 was altered to:

2. *If you referred X to another service, what service would this be and what would you be referring her for (e.g. a diagnosis)?*

**Table 5.2:** Stage 3 of vignette development

1. How likely would you be to refer X to a mental health service?					
2. If you referred X to another service, what service would this be and what would you be referring her for (i.e. a diagnosis)?					
3. How much do you think there is a safeguarding concern with X?					
Group (n)	Question Number	PND	OCD contamination	OCD Harm	Obscure Harm
Laypersons (4)	<b>Q1 Mean (s.d)</b>	30.00 (21.60)	45.00 (5.77)	71.25 (35.68)	85.00 (19.15)
	<b>Q2</b>	Depression (1); Health visitor (1); Therapy (1); Young Mothers Meeting (1)	CBT (1); Clinical Psychologist (1); GP (1); Obsessive behaviour (1); Would not refer (1)	Counsellor (2); Clinical Psychologist (1); GP (1); Social services (1)	Clinical Psychologist (1); Depression (1); Mental health (1); No response (1)
	<b>Q3 Mean (s.d)</b>	20.00 (8.16)	45.00(5.77)	65.00 (40.93)	85.00 (19.15)
Trainee Clinical Psychologists (4)	<b>Q1 Mean (s.d)</b>	26.25 (30.92)	53.75 (33.01)	61.25 (19.31)	85.00 (30.00)
	<b>Q2</b>	Extra support (1); IAPT (1); Low mood (1); Support group (1); Would not refer (1)	OCD (4); IAPT (2)	OCD (3); IAPT (1); Individual support (1); Mothers group (1); Psychosis (1); Social services (1)	Social services (3); Childcare/social support (2); Therapy (2); Depression (1); Stress management (1)
	<b>Q3 Mean (s.d)</b>	6.25 (4.79)	15.00 (12.25)	31.25 (16.52)	80.00 (23.39)

#### Stage 4

Between stages 3 and 4 the following script changes were made:

- PND was kept the same.
- OCD Contamination was kept the same.
- Obscure Harm was kept the same.
- Harm OCD was changed to hint at the content of the intrusive thoughts that a mother with pOCD may experience:

Stage 3: "Oh just horrible thoughts when I bathe the baby. They make me very worried. People do hurt their babies sometimes and I hate thinking that mums can do that kind of stuff and I try not to think about it."

Stage 4: "Oh just horrible thoughts when I bathe the baby- about what I could do to my baby. People do hurt their babies sometimes and it worries that mums can do that kind of stuff and I try not to think about it."

At stage 4 requests were sent to five laypersons, five Trainee Clinical Psychologists and two Midwives (see summary of responses in Table 5.3). The order of the questions was altered, beginning with what had been the last question. A second question was added to differentiate between whether the responder's safeguarding concern related to primary or secondary risk. Finally, the double-barreled nature of question two was separated into two questions

1. *How much do you think there is a safeguarding concern with Penny? (on a scale of 0-100:  
0=not at all, 100=definitely*



2. *If you think there is a possibility that there is a safeguarding concern, please state what the concern may be?*
3. *How likely would you be to refer Penny to a mental health service? (on a scale of 0-100: 0=not at all, 100=definitely)*
4. *If you had to refer Penny to another service, what diagnosis would you be referring her for (if you think there is one)?*
5. *And what service would you refer her to?*

**Table 5.3:** Stage 4 of vignette development

1. How much do you think there is a safeguarding concern with Penny?
2. If you think there is a possibility that there is a safe guarding concern, please state what the concern may be?
3. How likely would you be to refer Penny to a mental health service?
4. If you had to refer Penny to another service, what diagnosis would you be referring her for (if you think there is one)?
5. And what service would you refer her to?

<b>Group (n)</b>	<b>Question</b>	<b>PND</b>	<b>OCD contamination</b>	<b>OCD Harm</b>	<b>Obscure Harm</b>
<b>Laypersons (3)</b>	<b>Q1 Mean (s.d)</b>	46.67 (25.17)	36.67 (23.09)	73.33 (23.09)	85.00 (5.00)
	<b>Q2</b>	Depression (2); Insecurity (1)	OCD (2); Worry (1)	Harming the baby (2); Not sure (1)	Harming the baby (3); Low self-confidence (1);
	<b>Q3 Mean (s.d)</b>	43.33 (25.17)	21.67 (18.93)	73.33 (23.09)	89.17 (10.10)
	<b>Q4</b>	Depression (3)	OCD (3)	Depression (2); Anxiety (1)	Depression (3); Abuse (1); Anxiety (1)
	<b>Q5</b>	GP (2); Psychiatrist (1); Therapy (1)	Help group (1); Psychiatrist (1)	GP (2); Counseling (1); Self help group (1); Therapy (1)	GP(2); 'Psync' (1); Self help group (1); Social services (1); Therapy (1)

<b>Trainee Clinical</b>	<b>Q1 Mean (s.d)</b>	30.76 (37.54)	27.00 (32.75)	36.67 (34.03)	80.00 (26.46)
<b>Psychologists:</b>	<b>Q2</b>	Abuse (1); Mum's self esteem (1); No response (1); Normal feelings (1); Suicide / neglect (1)	Emotional or physical abuse (1); Feeding and coping (1); OCD (1)	Harming the baby (2); No concern (1)	Harm to baby (3); Harm to self (1)
PND and Contamination OCD vignettes (4) Harm OCD and Obscure Harm vignettes (3)	<b>Q3 Mean (s.d)</b>	50.00 (29.44)	52.50 (30.96)	51.67 (12.58)	93.33 (11.55)
	<b>Q4</b>	Depression (2); Self-esteem (1); Would not diagnose (1)	OCD (4); Anxiety (1); Would not diagnose (1)	OCD (2); Would not diagnose (1)	Depression (2); Adjustment (1); Anxiety (1); Would not diagnose (1)
	<b>Q5</b>	Support group (2); IAPT (1); Specialist service (1)	IAPT (3); Support group (1)	IAPT (1); Parenting support groups (1)	Brief treatment team (1); Childcare support (1); No response (1)
<b>Midwife (1)</b>	<b>Q1</b>	0	0	100	100
	<b>Q2</b>	No response	No response	Neglect/abuse (1)	Neglect/abuse (1)
	<b>Q3</b>	Would not refer (1)	Would not refer (1)	100	100
	<b>Q4</b>	Support group (1)	Support group (1)	No response	No response
	<b>Q5</b>	GP (1)	GP (1)	Safeguarding team (1)	Safeguarding team (1)

Stage 5:

Finally, as stage 5, responses were sought on the videos. Between stages 4 and 5 all scripts were kept the same as those at stage 4, resulting in the following final scripts shown in Table 5.4 presented in the order in the table.

**Table 5.4:** Scripts of the four final vignettes used in the videos and in the training

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**Final Vignettes**

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*OCD Contamination 'Penny':*

HV: "How are you coping generally?"

Mum: "I'm really worried about my baby getting ill. I keep thinking about the bottles. But I suppose it's good to wash bottles a lot to be sure"

HV: "What kind of thing do you mean?"

Mum: "I do like to make sure the bottles are clean enough. I don't like it when she is screaming for a bottle and I need to sterilise it again to be sure it's clean. Other mums seem to be coping better than me"

---

*PND 'Jane'*

HV: "How are you coping generally?"

Mum: "Well ok. I've definitely noticed how much life's changed since I had the baby. I'm just feeling overwhelmed."

HV: "What kind of thing do you mean?"

Mum: "I love my baby so much but I don't feel good enough to be her mum. I worry that I can't do it properly which gets me down. Other mums seem to be coping better than me."

Obscure Harm 'Sarah':

HV: "How are you coping generally?"

Mum: "I'm worried I shouldn't be a mum. I have some bad thoughts when I feel stressed. I do love my baby but I think I need some more childcare support"

HV: "What kind of thing do you mean?"

Mum: "Sometimes I just can't cope and feel frustrated with things at home so then I end up thinking about hurting my baby."

---

OCD Harm 'Rachel':

HV: "How are you coping generally?"

Mum: "I'm worried I shouldn't be a mum. I have some horrible thoughts. I do love my baby so much though. I would never want any harm to come to my baby."

HV: "What kind of thing do you mean?"

Mum: "Oh just horrible thoughts when I bathe the baby- about what I could do to my baby. People do hurt their babies sometimes and it worries that mums can do that kind of stuff and I try not to think about it."

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This stage featured snowballing sampling, meaning it is unknown how many people the request was forwarded to and the researcher was therefore unable to calculate a response rate for this stage. In Table 5.5 responders are divided into three categories:

- Health visitor (1),
- Other (not mental health) expertise health professionals (OHP; Occupational Therapist (1); Nurse Manager (1); General Manager for CAMHS (1))

- Health professionals with higher-level mental health training (MHP; Consultant Addictions Psychiatrist (4); Clinical Psychologist (3); Consultant Child Psychiatrist and Psychotherapist (1); Senior Lecturer in Psychiatry (1)).

Question 2 was added after the first requests had been sent, so not all responders answered this question.

1. *How much do you think there is a safeguarding concern with X? (on a scale of 0-100: 0=not at all, 100=definitely)*
2. *How likely would you be to raise a concern with the safeguarding team? (on a scale of 0-100: 0=not at all, 100=definitely)*
3. *If you think there is a possibility that there is a safeguarding concern, please state what the concern(s) may be.*
4. *How likely would you be to refer X to a mental health service? (on a scale of 0-100: 0=not at all, 100=definitely)*
5. *If you had to refer X to a mental health service what potential diagnosis would you be referring her for (if you think there is one)?*

**Table 5.5:** Stage 5, a pilot of the videos used in the main study

1. How much do you think there is a safeguarding concern with X?
2. How likely would you be to raise a concern with the safeguarding team?
3. If you think there is a possibility that there is a safeguarding concern, please state what the concern(s) may be.
4. How likely would you be to refer X to a mental health service?
5. If you had to refer X to a mental health service what potential diagnosis would you be referring her for (if you think there is one)?

<b>Group (n)</b>	<b>Question Number</b>	<b>PND</b>	<b>OCD contamination</b>	<b>OCD Harm</b>	<b>Obscure Harm</b>
<b>Health</b>	<b>Q1</b>	10	10	85	100
<b>visitor (1)</b>	<b>Q2</b>	10	10	100	100
	<b>Q3</b>	Low mood impact on ability to care for baby (1)	Anxiety impact on ability to care for baby (1)	Harm to baby (1)	Harm to baby (1)
	<b>Q4</b>	15	20	100	70
	<b>Q5</b>	Depression (1)	Anxiety (1)	Anxiety (1); Depression (1); Psychosis (1)	Anxiety (1); Depression (1); Mental Health (1)
<b>OHP (3)</b>	<b>Q1 Mean (s.d)</b>	16.67 (28.87)	20 (13.23)	60 (17.32)	56.67 (30.55)
<b>Q2 (1)</b>	<b>Q2 Mean</b>	0	40	75	65
	<b>Q3</b>	No response (2); Attachment (1)	Interrupted care (1); None (1); Impair development (1);	Drowning child (1); Delusional (1); Harm to baby (1)	Harm to baby (2); Physical harm to baby (1)

	<b>Q4 Mean (s.d)</b>	46.67 (50.33)	26.67 (37.86)	73.33 (7.64)	61.67 (20.21)
	<b>Q5</b>	Depression (2); Anxiety (2); Attachment (1); Would not diagnose (1)	OCD (2); Anxiety (2); Depression (1); Attachment (1); Normal feelings (1)	Anxiety (1); Psychotic depression (1); Post natal psychosis (1); Depression (1)	Depression (3); Anxiety (1); Psychosis (1)
<b>MHP (9),</b>	<b>Q1 Mean (s.d)</b>	10.56 (7.68)	21.33 (25.27)	37.22 (37.51)	59.44 (25.06)
<b>Q2 (2)</b>	<b>Q2 Mean</b>	2.5	2.5	52.50	70
	<b>Q3</b>	No concern (2); Depression (2); Suicide (2); Neglect (1);	Feeding delays (4); Interaction decrease (1); Frequent washing (1); Prevention of care (1); Risky when panicky (1)	No immediate concern (4); Harm to baby (4); Harm to baby but shows insight (1)	Harm to baby but requesting support (1); Harm to baby (6); Poorly bonded (1); Further assessment (1)
	<b>Q4 Mean (s.d)</b>	35.28 (29.38)	45.56 (32.83)	46.11 (34.98)	51.11 (28.92)
	<b>Q5</b>	Depression (8)	OCD (7); Anxiety disorder (2); Depression (2); Psychosis (1)	OCD (5); Anxiety (1); Depression (2); Would not diagnose (1); No response (1); Delusional disorder (1)	Depression (6); Personality disorder (2); Psychosis (2); OCD (2); Anger (1); No social support (1)



In the responses in Table 5.5 of note is the difference in safeguarding concern between MHPs and OHPs on the OCD Harm versus Obscure Harm. They seem to indicate that professionals with mental health expertise are more able to consider the egodystonic versus non-egodystonic nature of thoughts/feelings about harm to baby and rate accordingly.

The questions were given a final minor adjustment (see below).

Question 1 was altered to be more specific to ask about a mental health assessment as compared to other support that mental health services may provide. Many responders said they did not have enough information to answer the questions so the word 'potential' was added to question 2 to acknowledge the limited information in the vignette. One question, regarding likelihood to raise concern with a safeguarding team, was removed as it was felt data regarding safeguarding would be captured by the other two questions. Question 3 was made more specific by adding child safeguarding. The remaining question was kept the same. The final two questions on the questionnaire were not piloted as they were more reliant on the responder being a health visitor and question 5 was deemed difficult to ensure clear formatting within email.

The questions for each vignette were finalised as follows:

1. How likely would you be to refer X for an assessment of her mental health?  
(rating of 0-100%)
2. If you had to refer X for a mental health assessment, what potential diagnosis would you be referring her for (if you think there is one)?
3. How much do you think there is a **child** safeguarding concern with X? (rating of 0-100%)

4. If you think there is a possibility that there is a child safeguarding concern, please state what the concern(s) may be.
5. What would you say to X? (Please tick box)
  - Tell her to try to stop thinking about it
  - Advise her not to tell anyone
  - Say that these thoughts are very worrying
  - Suggest that she changes her behaviours
  - Tell her not to pay any attention to thoughts like this
  - Tell her lots of people have these kinds of thoughts
  - Tell her lots of people find being a new mum difficult
6. How confident do you feel in offering some helpful support to Penny regarding this issue? (rating of 0-100%)



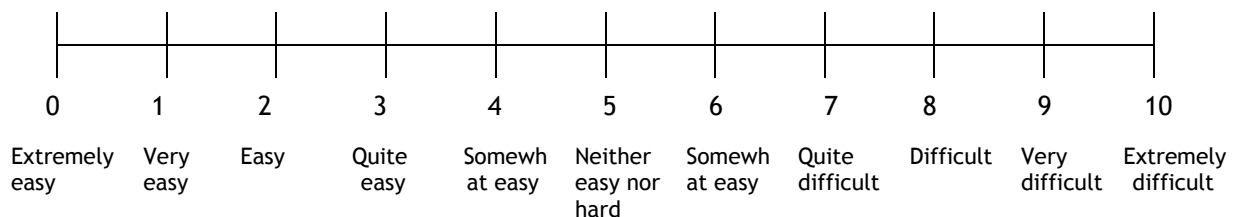
## Emotional Wellbeing Following Pregnancy - Questionnaire

Some of the questions ask about Intrusions:  
*Intrusive thoughts are thoughts that suddenly enter your mind, may interrupt what you are thinking or doing and tend to recur on separate occasions. This may occur in the form of words, mental image, or an impulse (a sudden urge to carry out some action).*

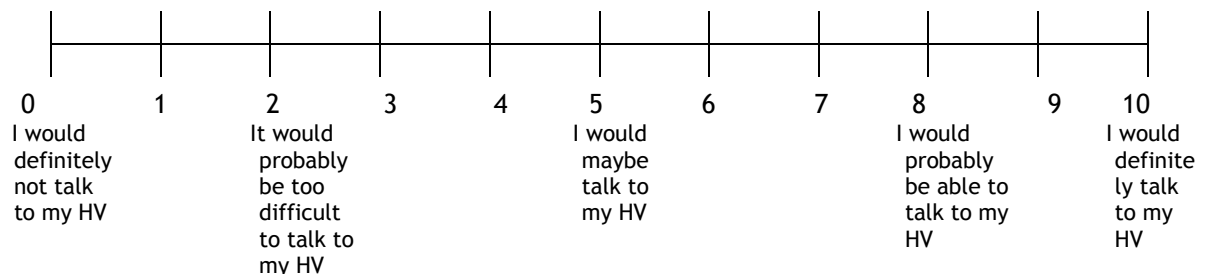
**1.** Did your Health Visitor talk to you about intrusions?

Yes  No

**2.** How easy would it have been (or was it) for you to talk to your Health Visitor about any intrusive thoughts you are experiencing?



**3.** How likely would you be to talk to your Health Visitor (HV) about any intrusions you are experiencing? (If you did talk to you HV about intrusions, please rate 10)



**4.** Did you talk to your Health Visitor about your own experiences of intrusions?

Yes  No

**5.** Below is a list of thoughts that people commonly experience after having a child. Please tick those that apply to you. Please circle the type of thought that troubles you the most:

- Baby suffocating       Illness       Baby having an accident
- Sexual thoughts about baby       Losing the baby       Cot death
- Baby may get contaminated       Intentionally harming the baby
- Magical thinking about bad things happening to the baby
- Other (please state)

**6.** Below is a list of behaviours people may do as a result of such thoughts. Please tick those that apply to you. Please circle the type of behaviour you do the most frequently:

- Self-reassurance     Seek reassurance from others     Religious prayer
- Checking       Seek social support in general       Cleaning
- Behavioural distraction (trying to do something else)       Avoidance
- Cognitive distraction (trying to think about something else)
- Perform a ritual (e.g. counting, tapping or straightening)
- Other (please state)

7.

How bothered have you been by any of the following intrusive thoughts about your baby?											
	Not at all Extremely										
	0	10	20	30	40	50	60	70	80	90	100
Baby suffocating	0	10	20	30	40	50	60	70	80	90	100
Sexual thoughts about baby	0	10	20	30	40	50	60	70	80	90	100
Baby may get contaminated	0	10	20	30	40	50	60	70	80	90	100
SIDS (cot death)	0	10	20	30	40	50	60	70	80	90	100
Baby having an accident	0	10	20	30	40	50	60	70	80	90	100
Intentionally harming the baby	0	10	20	30	40	50	60	70	80	90	100
Losing the baby	0	10	20	30	40	50	60	70	80	90	100
Illness	0	10	20	30	40	50	60	70	80	90	100
Magical thinking about bad things happening to the baby	0	10	20	30	40	50	60	70	80	90	100
Other (please state)	0	10	20	30	40	50	60	70	80	90	100

8.

When people experience any of the thoughts mentioned above, they may respond in a range of ways. What % of the time have you done any of the following when you experience intrusions?'											
	0% <span style="float: right;">100%</span>										
	0	10	20	30	40	50	60	70	80	90	100
Self-reassurance	0	10	20	30	40	50	60	70	80	90	100
Seek reassurance from others	0	10	20	30	40	50	60	70	80	90	100
Checking	0	10	20	30	40	50	60	70	80	90	100
Seeking social support in general	0	10	20	30	40	50	60	70	80	90	100
Avoidance	0	10	20	30	40	50	60	70	80	90	100
Cognitive distraction (trying to think about something else)	0	10	20	30	40	50	60	70	80	90	100
Religious/prayer	0	10	20	30	40	50	60	70	80	90	100
Behavioural distraction (trying to do something else)	0	10	20	30	40	50	60	70	80	90	100
Other (please state)	0	10	20	30	40	50	60	70	80	90	100

**9.**

For each statement, please rate as either 0, 1, 2 or 3 to indicate how much the statement applied to you *over the past week*. There are no right or wrong answers.

	Did not apply to me at all	To some degree / some of the time	To a considerable degree / a good part of time	Very much, or most of the time
I found it hard to wind down	0	1	2	3
I was aware of dryness of my mouth	0	1	2	3
I couldn't seem to experience any positive feeling at all	0	1	2	3
I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
I found it difficult to work up the initiative to do things	0	1	2	3
I tended to over-react to situations	0	1	2	3
I experienced trembling (eg, in the hands)	0	1	2	3
I felt that I was using a lot of nervous energy	0	1	2	3
I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
I felt that I had nothing to look forward to	0	1	2	3
I found myself getting agitated	0	1	2	3
I found it difficult to relax	0	1	2	3
I felt down-hearted and blue	0	1	2	3
I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
I felt I was close to panic	0	1	2	3
I was unable to become enthusiastic	0	1	2	3

about anything				
I felt I wasn't worth much as a person	0	1	2	3
I felt that I was rather touchy	0	1	2	3
I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2	3
I felt scared without any good reason	0	1	2	3
I felt that life was meaningless	0	1	2	3

## 10.

### How long ago did you last see your Health Visitor?

- In the last week       In the last month  
 In the last two weeks       More than one month ago

### Other Details:

Your age: \_\_\_\_\_ Days since birth of baby: \_\_\_\_\_

### How would you describe your ethnicity?

#### White

- British  
 Irish  
 Any other White background

#### Asian or Asian British

- Indian  
 Pakistani  
 Bangladeshi  
 Any other Asian background

#### Mixed

- White and Black Caribbean  
 White and Black African  
 White and Asian  
 Any other mixed background

#### Black or Black British

- Caribbean  
 African  
 Any other Black background

#### Other Ethnic Groups

- Chinese  
 Any other ethnic group  
 Not stated

Thank you for taking the time to complete this questionnaire. Please return this to us in the pre-paid return envelope with your consent form and prize draw form.



## Participant Information Sheet Emotional Wellbeing Following Pregnancy

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you.

The study aims to develop strategies and training for Health Visitors to help mothers with thoughts that they may be finding distressing following a new baby. This questionnaire forms part of a research project being completed within a Clinical Psychology training course.

There are two parts to the study, separated into two boxes below.

### **Mothers**

A research project is taking place with the mothers you are seeing across the areas of Weybridge, Walton, Addlestone and Egham. At some point mothers who you work with may be asked about mental health and wellbeing, including obsessive-compulsive disorder. Your role should not be affected by the research, however it is important that you know it is taking place. You have the right not to participate in the study.

The project will invite new mothers to complete a questionnaire which asks about their emotional wellbeing. Following the questionnaire there will be no further follow-up. If a mother chooses to participate she will have the opportunity to enter into a prize drawer to win Boots vouchers.

### **What to do if a mum raises something about the research:**

- Remind them that their participation is voluntary
- If they have specific questions about the research, you do not need to answer these, please advise them to use the contact details for the research team provided on their information sheet: They can telephone 01784 414 012 to contact the research team. Please note this is a voicemail service so they will need to specify that the message is for Katrina Rumball.
- If the mother raises something that is more a matter that requires clinical attention please respond to this as you normally would (i.e. appropriate referral pathways if necessary).

## **Training**

You have been invited to take part because you work in an area where training is being offered. Your participation is voluntary.

### *What's involved?*

If you would like to take part, first this involves completing the consent form. As part of the training we will ask you to complete one questionnaire beforehand and one questionnaire at the end – all contained in the training time and we will incorporate them into the learning experience. Training will focus on wellbeing in mothers who have recently had a child.

### *Will my taking part in the study be kept confidential?*

All information you provide will be kept confidential and we adhere to strict ethical and legal practice for data storage. Only the research team will have access to your data. You will notice that you do not need to provide your name on your questionnaire. Once we receive your questionnaire and consent form, these will be stored separately and we will then only use a participant identification key to refer to your data or to match this to your consent form if we need to.

### *Who has reviewed the study?*

All research in the NHS is looked at by an independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by Edgbaston Research Ethics Committee. The project has also been reviewed and given ethical approval by Royal Holloway Research Ethics Committee and by Virgin Care.

### *What will happen to the results of the research study?*

Once study data has been analysed we will inform your managers of the results of the study which they will be able to report back to you. The results will contribute to a doctorate thesis and are expected to be published in scientific journals. No data will be published that would identify any of the participants; the findings will describe an overall picture of what we find from the research.

### *Further Questions?*

If you would like to ask any questions about either part of the project please telephone 01784 414 012. Please note this is a voicemail service so they will need to specify that the message is for Katrina Rumball.

**Thank-you** for your time.

### *What if there is a problem?*

If you have a concern about this study, please contact us and we will do our best to resolve any concerns [01784 414 012]. If you wish to complain formally, you can do this in the first instance by contacting Lorna Jamison or Fiona Whitaker on 01932 565655 or the details of our complaints procedure can be obtained from our Customer Services Manager on 01932 723855. In the event that something does go wrong and you are harmed during the research and this is due to someone's negligence then you may have grounds for a legal action for compensation against Royal Holloway.

**Appendix 5:** Health visitor consent form



## CONSENT FORM

Title of Project: Emotional Wellbeing Following Pregnancy

Name of Researcher: Katrina Rumball, Trainee Clinical psychologist, Royal

Holloway

Please  
initial all  
boxes

- I confirm that I have read and understand the information sheet dated 24/04/2014 Version 2 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
- I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being effected.
- I agree to take part in the study

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

## Participant Information Sheet Emotional Wellbeing Following Pregnancy

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you.

The study aims to develop strategies and training for Health Visitors to help mothers with thoughts that they may be finding distressing following a new baby. This questionnaire forms part of a research project being completed within a Clinical Psychology training course.

**You have been invited to take part because you work in an area where training is being offered. Your participation is voluntary.**

### *What's involved?*

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### *Further Questions?*

If you would like to ask any questions about either part of the project please telephone 01784 414 012. Please note this is a voicemail service so they will need to specify that the message is for Katrina Rumball.

**Thank-you** for your time.

### *What if there is a problem?*

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## **Emotional Wellbeing Following Pregnancy** **Information Sheet**

A research project is taking place with the mothers you are seeing across the areas of Weybridge, Walton, Addlestone and Egham. At some point mothers who you work with may be asked about mental health and wellbeing, including obsessive-compulsive disorder. Your role shouldn't be effected by the research, however it is important that you know it is taking place. You have the right not to participate in the study. If you would like to ask any questions about the project please telephone 01784 414 012. Please note this is a voicemail service so they will need to specify that the message is for Katrina Rumball.

The project will invite new mothers to complete a questionnaire which asks about their emotional wellbeing. Following the questionnaire there will be no further follow-up. If a mother chooses to participate she will have the opportunity to enter into a prize drawer to win Boots vouchers.

### **What to do if a mum raises something about the research:**

- Remind them that their participation is voluntary
- If they have specific questions about the research, you do not need to answer these, please advise them to use the contact details for the research team provided on their information sheet: They can telephone 01784 414 012 to contact the research team. Please note this is a voicemail service so you will need to specify that the message is for Katrina Rumball.
- If the mother raises something that is more a matter that requires clinical attention please respond to this as you normally would (i.e. appropriate referral pathways if necessary).

**Appendix 8:** Control leaflet provided to both groups of health visitors at the beginning of the study

24/04/2014, Version 2

# Emotional Wellbeing Following Pregnancy

## What Is OCD?

Obsessive-compulsive disorder is characterised by recurrent obsessions (persistent and intrusive thoughts, images or impulses) and/or compulsions (compelling repetitive behaviour, rituals or mental acts intended to put right or neutralise the obsession.)

People are aware that their fears are probably unfounded, but remain compelled to act on them trying to ignore, suppress or 'neutralise' them. For a clinical diagnosis, the obsessions or compulsions must cause a marked distress, last for more than one hour per day, or significantly interfere with the person's normal functioning (DSM-IV-TR).

## What is Postnatal Depression?

Postnatal depression affects between 10 to 15 in every 100 women having a baby. In the DSM-V its onset is specified to be within four weeks of birth. It is characterised by depressed mood and/or loss of interest or pleasure. To meet diagnostic criteria the mother would also be experiencing at least three or four (depending on whether one or two of the above are included) of the following: weight/appetite changes, insomnia/hypersomnia, psychomotor retardation/agitation, loss of energy, worthlessness/guilt, suicidal ideation, or impaired concentration/indecisiveness.

## What is Anxiety?

Anxiety is part of normal human experience and is a reaction to situations we find stressful, fearful or dangerous. It is sometimes useful to compare it to the fight or flight response - the body preparing for action either to fight danger or run away from it as fast as possible.

Anxiety becomes abnormal when it is severe or inappropriate without adequate cause and lasting a long time. Around 1 in 10 people experience anxiety disorders at some point during their life.

## **Appendix 9:** Summary of the service-user development of the training

Key quotes representing the main topics are provided in bullet points, with clarifications in brackets where necessary. For ease of reading, filler words such as ‘um, er, were not included and are represented by dots (...).

*Was there anything that your Health Visitor said or did that was helpful regarding struggles with OCD?*

### **SU1:**

- Certainly not for the first one.
- [Regarding her second health visitor] she did ask, “Have you got everything set up to keep yourself well?”.
- They didn’t ask me how I was.... Any physical questions they covered fantastically. They never asked. Apart, I mean, they did obviously the Edinburgh what's it. They asked me the PND, but nothing would’ve got picked up with those questions about me [her OCD].

### **SU2:**

- Pre-diagnosis, no, but her kindness was phenomenally helpful - I had so much trust in her even though I couldn’t really tell her the thoughts until after I’d been diagnosed.
- [She] never left the house without saying something positive about me and the children and that was very helpful in itself [...] she constantly gave me praise.

### **SU3:**

- I was asked about my medical history, but OCD is more mental. It’s not really a medical problem so you wouldn’t have said it when they asked about any previous medical history.

*What other things could your Health Visitor have said or done to make a positive difference regarding struggles with OCD?*

### **SU1:**

- With a first child [...] what would’ve really helped was “How are you adjusting to first time motherhood?” [or] “How are you coping now you’ve got an additional child?”
- If I has been asked “How is my wellbeing generally?” as opposed to how I’m physically responding.
- And if I had been asked, “Is there anything I want to ask them?” that would’ve been really helpful....
- If there was information in like a bounty pack as a prerequisite,
- Something about how your brain reacts as much as your body does sometimes to pregnancy and early parenthood.
- If I’d been told that it’s really normal to have them, then it would have made a huge difference to me. And I know from other women too.

### **SU2:**

- They need to look for something positive that can be said about the mother and the child because they may well be in a relationship or in a family where they feel very isolated

### **SU3:**

- If they'd asked me if I'd ever had OCD previously.
- Pointed out some of the websites that I could gain more knowledge from.
- What could happen, you know, the consequences, that would definitely help.



*What would you like Health Visitors to be knowledgeable about or have skills in regarding OCD?*

**SU1:**

- That there's yet to be a reported case of harm to a child as a result of a mother having had perinatal OCD [...] the fundamental part of having postnatal OCD is that you want to protect the child.
- That they have to listen to what the mother is saying so they don't miss it.
- To signpost appropriately.
- They seem to have such a focus on PND, that they miss that it could be another perinatal mental illness.
- It's normal to have intrusive thoughts cos I think some of them don't think it is...
- I'd want them to know where to signpost a mother to...
- I'd want them to know what type of support a mother would need, so if a mother then gets frightened they can give them a bit of informed information, they're not going to provide the therapy but they might say, "You know what, it's called CBT and this is what it is and I've heard such great things".
- [That they] would have to know to choose their words carefully, because if they react instantly without listening and they say words about reporting or social services they've lost that mum.
- They can't look shocked, they have to look understanding, and they have to be very empathetic.

**SU2:**

- I would like them all to read 'Break Free from OCD'.
- How mothers should actually be able to see a psychiatrist.
- I want them to have access to lists of support groups for OCD over the country.
- If they can keep a straight but sympathetic face.
- Do some skills in practicing what they need to say [...] I think that's very helpful to be told I was one of thousands of women going through this.
- She needs skills to recognise these things, not just what she says but skills of observation.

**SU3:**

- A lot of people picture OCD as something that is about cleaning or switching a light on and off a couple of times, compulsiveness [...] they should know the different aspects.
- I think it's important that they know that it actually starts from a thought.
- [They] should also have documentation and a questionnaire advising parents what could happen
- Maybe a contact on your notes when you're pregnant that you can contact.
- Maybe health visitors should know about CBT therapy because I think CBT therapy was very helpful.
- Really it's about them knowing the fears of mothers and how this might effect them emotionally [...] I think all mums experience some fears and that's useful to know.

*I will read aloud our health visitor training plan. Please tell me what you think.*

- *Prevalence*
- *Video examples*
- *What is an intrusive thought*

- *Normalising intrusive thoughts*
- *The CBT model and how obsessions and compulsions are propelled/ maintained*
- *Primary and secondary risk - thinking about the meaning/ misinterpretation of intrusive thoughts and distinguishing between direct risk of harm and secondary risks due to OCD (e.g. exhaustion, disruption of mother-baby bond, delayed feeding)*
- *Further resources, where to signpost*

**SU1:**

- I think that's really useful. I don't think there's anything else you could put in really.
- Also that mums are scared of being reported for it.
- You could emphasise empathy and not looking shocked.
- Maybe prevalence to other things postnatally.

**SU2:**

- [About normalising] This is something that I do [describes ways of helping people recognise their own intrusive thoughts].
- Not just relying on the EPDS.
- Encourage asking partner/husband about how they are.

**SU3:**

- Also maybe thinking about the family, because I know my parents were upset. Going through the CBT ideas with them.

# Postnatal Obsessive Compulsive Disorder: What is it and how can you help mums?

Department

Katrina Rumball and Abigail Wroe, RHUL



ROYAL  
HOLLOWAY  
UNIVERSITY  
OF LONDON

## *Learning outcomes*

Department

- Understanding of what is postnatal OCD
- Learn about intrusions, and who has them?
- Improve understanding about how intrusions can cause distress
- Understanding as to why intrusions do not present risk
- Learn clinical skills to help mums

## *The diagnostic phenomenology of OCD (DSM IV)*

Department

Intrusive thoughts, images and impulses

Obsessions and/or compulsions

Compulsions are meaningfully related to fears (for that individual)

By definition, the person seeks to ignore or suppress intrusions

Key to diagnosis is distress / disability- obsessions / compulsions for greater than an hour a day

Person recognises obsessions/compulsions as excessive

## *Research evidence*

Department

***Rachman & de Silva (1978)***

***Salkovskis & Harrison (1984)***

Almost 90% of the general population experience upsetting intrusive thoughts, that is unacceptable thoughts, that enter in to the mind and interrupt the present thinking.

These thoughts are indistinguishable between obsessionals and non-obsessionals in terms of content .

*So what are they?*

Unwanted thought	%	%
	women	men
1. Did I leave heat, stove or lights on that could cause a fire	79	62
2. Left the door unlocked, an intruder could be inside	77	65
3. While driving, an impulse to run the car off the road	64	53
4. I could get a sexually transmitted disease from touching a toilet seat or handle	60	40
5. Even though the house is tidy, an impulse to check that absolutely everything is put away	52	40
6. Feel sudden impulse to say something rude to insulting to a friend even though I'm not angry at him	59	55
7. Impulse to say something rude or insulting to a stranger	50	55
8. While driving, the impulse to swerve the car into a stranger	55	49
9. Thought of having sex in a public place	55	67
10. The thought of having sex with an authority figure (e.g. minister, boss, teacher).	51	62
11. While driving, the thought of running over pedestrians or animals	46	51
12. When talking to people, intrusive thought of their being naked	44	63
13. Impulse to indecently expose myself by lifting my skirt or slipping down my pants	14	24
14. Impulse to masturbate in public	11	18
15. When I see a sharp knife, the thought of slitting my wrist or throat	20	22
16. When in a public place, the thought of becoming dirty or contaminated from touching doorknobs	35	23
Purdon and Clark, 2003; Byers et al 1998		

## Intrusive Thoughts reported Postnatally

Department

The most commonly reported obsessional thoughts are:  
fears of intentionally or accidentally harming the fetus or child

### Examples (Zambaldi et al)

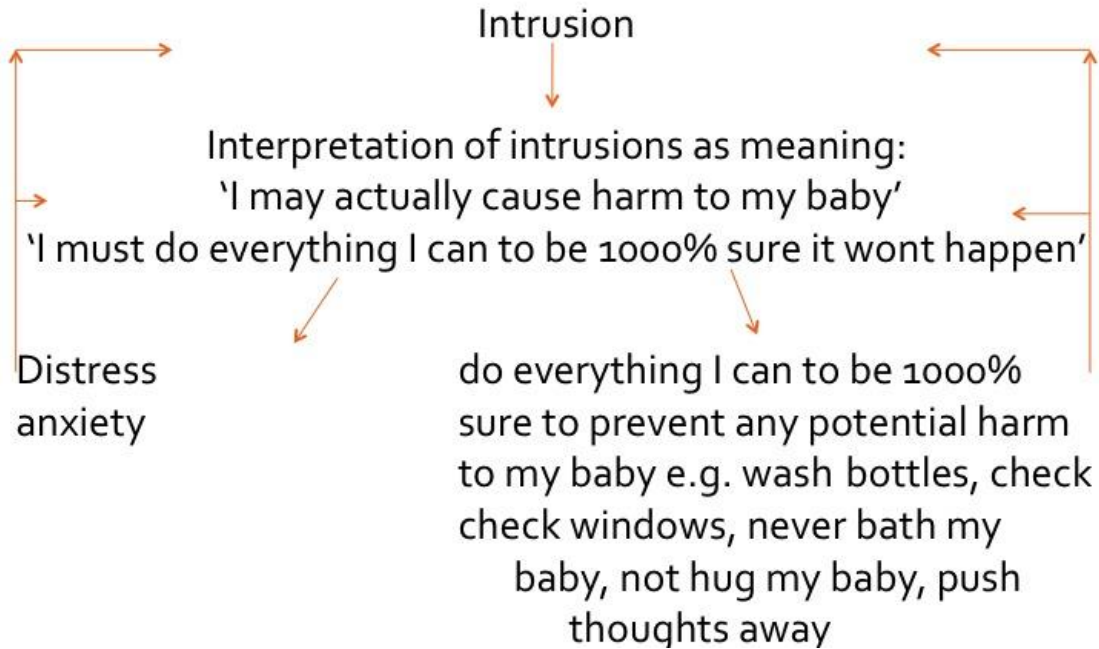
- accidentally harming the baby due to chemicals on hands
- thoughts about dropping the baby
- putting him or her in the microwave oven
- throwing boiling water over him or her
- the baby dying or having an accident
- Thoughts that the baby may have stopped breathing

Turkey et al. (2007) found

- most common **obsessions** in pOCD were contamination (75%), aggressive (33.3%), and symmetry/exactness (33.3%),
- most common **compulsions** were cleaning/ washing (66.7%) and checking (58.3%)

## What happens when we experience intrusions?

Department



## Is OCD Extra Relevant to Mums?

Department

A two-fold answer – onset and exacerbation

Of women with OCD who had children 39% said pregnancy was associated with OCD onset, more than any other life event

2-6 weeks after birth 9% met diagnostic criteria and 2.3% of the whole sample reported postnatal onset OCD - more than 2 in 100 women.

In women with preexisting OCD 34.1% of pregnancies involved an exacerbation of symptoms

## Exercise 1- in pairs/groups of 3

Department

Have a look at your sheet with the list of intrusions on.

**Which of them have you experienced? You may have experienced some of these thoughts as a mother, with a friend or relative's child or in your Health Visitor role.**

- How did you interpret them?
- How would you feel if you interpreted occurrence/content so that you are now responsible for serious harm if you fail to act?
- What would you do?

## *COGNITIVE THEORY OF OCD (salkovskis, 1985; 1989)*

Department

\*Unacceptable intrusions are a normal occurrence\*

When intrusions have occurred, the obsessional patient tends to **misinterpret this occurrence / content as indicating that they may be responsible for serious and potentially avoidable harm to themselves or others.**

The patient therefore believes that he/she must do everything she can to prevent the potential harm.

They respond by TRYING TOO HARD (to get rid of the thought, to prevent harm, to be sure, to be clean....and so on)

As time goes by, THE SOLUTION BECOMES THE PROBLEM.

## Primary risk

Department

### OCD or potential sexual offender?

- Ego-dystonicity of the thoughts
- Failure to act on or masturbate to the thoughts
- Avoidance of trigger situations
- Efforts to suppress the thoughts
- Very frequent or constant occurrence of the thoughts
- Dominant anxiety, distress and guilt about the thoughts
- Over-disclosure of irrelevant past sexual history
- Wanting help and seeking referral to mental health services
- Presence of additional obsessive–compulsive symptoms

### OCD or risk of violence?

- Ego-dystonicity
- Absence of past behaviour consistent with the thought
- Presence of avoidance behaviour (e.g. avoidance of knives or sharp implements)
- Frequent thoughts
- High degree of distress
- Strong motivation to seek help

**Never been a recorded case of harm to the child from a mother acting out the content of their intrusion**

## Secondary Risk and Consequences

Department

Do consider wellbeing of the mother re self-harm and suicide and comorbidity with depression.

Potential consequences of misinterpreted or untreated pOCD

- Negative impact on mother's wellbeing and enjoyment of motherhood,
- Disruption of mother-baby time together / bonding
- General stress in the family environment,
- Impact on feeding the baby, i.e. delays
- Child vulnerability to other types of psychopathology or compromised functioning
- Damage to social relationships



## How to distinguish between risky thoughts and intrusions

Department

The best thing to do here is ask.

- Use empathy (and normalise)
- Remember how frightened the mother may feel

*How do you feel when you have that thought?*

*What do you do when you have the thoughts? Why?*

## Examples of Postnatal OCD – violent thoughts

Department

Jessica interpreted the very fact that she was having thoughts about harming her new baby as meaningful and became frightened that she may act upon them in a moment of madness.

She began to take special measures to stay 'safe' around him such as hiding all the knives and sharp objects in the home. She prevented her older son from using a knife to eat, or using paper scissors, in case she grabbed it. When she was most distressed, this extended to pencils and pens, and she coped by avoiding being with her baby.

She finds it difficult to do everything she needs to for him and the other children, and around the home, losing precious sleep and bonding time with her baby.

She is fearful of being judged by friends and other mothers if she tells them so withdraws from her normal social activities.

## Examples of Postnatal OCD - checking

Department

July had heard stories about sudden infant death syndrome. She started to experience lots of intrusive thoughts about this at home and became highly distressed.

She began checking her baby more and more each night and felt reluctant to let family members help her despite her exhaustion. Her husband found her constant checking during the night that their baby was still breathing very worrying and his sleep also became very disturbed impacting on his performance at work.

She then started to worry about her own ability to check properly, and asked her husband to check their baby was breathing during the night.

The difficulties placed a strain on their relationship.

## Examples of Postnatal OCD – sexual thoughts

Department

When Molly was changing her daughters nappy one morning, she had the thought that she might sexually abuse her baby. She worried that because she had had this thought, she may actually want to do it. She felt very distressed and guilty.

She tried to push the thoughts away, but this didn't work. She started to avoid changing soiled nappies for fear of inadvertently touching her baby in an inappropriate way. This meant her baby could go for long periods with an unchanged nappy.

She began mentally reviewing daily tasks and events in an attempt to reassure herself that she didn't want to abuse her child. She also started monitoring herself for perceived inappropriate sexual arousal when she hugged her baby. She became highly distressed and would withdraw from her baby if she thought this was happening.

## Examples of Postnatal OCD - washing

Department

While Louise was playing with her baby she had an intrusive thought that the toys might be dirty and contaminate the baby. She had an image of the baby being ill, and it all being her fault.

She began to excessively wash all of his toys before he touched them, and made sure he didn't play with any of the toys at play groups or other people's houses.

Louise became very frightened of being responsible for something bad happening to her baby.

She worried also about her partner's hands being dirty, and asked him to wash his hands every time he touched the baby or the baby's toys. This had an impact on their relationship.

Louise began to isolate the baby from other people out of fear that he may be contaminated, and become very unwell or even die.

## Normalising

Department

- A routine part of CBT treatment
- A key part of reducing anxiety and strengthening alliance
- These will help the mother immediately, and also may be hugely valuable if you are going to discuss an onward referral for the mother

Thought suppression:  
Do not think of a white bear...

# Normalising

Department

*I understand that you  
experience intrusions.....*

*Its not really surprising  
that you have thoughts  
like this.....*

*These thoughts are normal and  
over 90% of population experience  
difficult and intrusive thoughts*

*Mothers often become a bit more  
'obsessional' about washing and  
checking – and that's because they  
love their child very much.*

*Having the thoughts does  
not mean anything bad  
about you as a mum- just  
that they care very much*

*Offering support about the  
distress caused by these  
thoughts- but not to stop  
them as they are normal*

*I experience intrusions.....*

## So how can you help people manage intrusions?

Department

Do an exercise on normalising  
E.g. saying own intrusions,

Normalising:

Who has particular obsessional thoughts?

Who is bothered by violent thoughts?

Who is bothered by blasphemous thoughts?

What does this mean?

How do worries work? What do most people worry about?

## SUMMARY

Department

Occurrence of unpleasant intrusions is normal

OCD occurs when people have a HEIGHTENED sense of responsibility

When people have babies, responsibility increases, making people vulnerable to symptoms of OCD

Many mums experience symptoms of OCD (distress around intrusions, and related behaviours) even if they do not meet clinical levels for a diagnosis of OCD.

Even though many people experience intrusive thoughts of harm (sexual / violence) we find it hard to talk about it- reinforcing the belief that such thoughts are 'bad'.

Normalising can have an important beneficial impact on mum's perceptions of the occurrence of intrusions

This may reduce risk of OCD and improve quality of life in people with symptoms of OCD.

SO ENCOURAGE YOUR MUMS TO TALK ABOUT INTRUSIONS and NORMALISE

## Further Resources

Department

While considering these thoughts are normal if you are concerned that the mother has clinical-level OCD **refer to their GP**

**[www.maternalocd.org](http://www.maternalocd.org)**

**Appendix 11:** Handouts provided to health visitors in training

**Postnatal Intrusions List**

1. thoughts of suffocation or sudden in-ant death syndrome (SIDS)  
e.g., “maybe my baby rolled over and suffered SIDS”
2. thoughts of accidents  
e.g., “I think of the neighbour’s dog attacking the baby”
3. unwanted ideas or urges of intentional harm  
e.g., “would she be brain damaged if I threw her out the window”
4. thoughts of losing the infant  
e.g., “someone stealing my baby in the grocery store”
5. illness  
e.g., “I was convinced she had cerebral palsy”
6. unacceptable sexual thoughts  
e.g., “a thought about the baby’s genitals”
7. contamination  
e.g., “I think often about microbiological contamination from people or objects”

**% of parents  
who reported experiencing these thoughts**

	<b>Mothers</b>	<b>Fathers</b>	<b>All</b>
<b>thoughts of suffocation or sudden in-ant death syndrome (SIDS)</b>	44	45	47
<b>thoughts of accidents</b>	27	26	26
<b>unwanted ideas or urges of intentional harm</b>	21	23	22
<b>thoughts of losing the infant</b>	8	3	7
<b>illness</b>	3	0	3
<b>unacceptable sexual thoughts</b>	2	0	2
<b>contamination</b>	0	2	1

Note: these are what participants felt prepared to self-report!  
Could they really be higher?

## **POSTNATAL OCD : TAKE HOME MESSAGES**

- It's normal to experience unpleasant intrusions
- OCD occurs when people have a HEIGHTENED sense of responsibility
- When people have babies, responsibility increases, making people vulnerable to symptoms of OCD
- Many mums experience symptoms of OCD (distress around intrusions, and related behaviours) even if they do not meet clinical levels for a diagnosis of OCD.
- Even though many people experience intrusive thoughts of harm (sexual / violence) we find it hard to talk about it- reinforcing the belief that such thoughts are 'bad'.
- Normalising can have an important beneficial impact on mum's perceptions of the occurrence of intrusions
- Raising safeguarding issues for OCD intrusions can be damaging for the mum
- This may reduce risk of OCD and improve quality of life in people with symptoms of OCD.

**SO ENCOURAGE YOUR MUMS TO BE ABLE TO TALK ABOUT INTRUSIONS and NORMALISE their occurrence**

<b>Characteristic of OCD Thoughts – no primary risk</b>
Ego-dystonic
Failure to act/masturbate to the thoughts
Avoid trigger situations
Efforts to suppress thoughts
Dominant anxiety, distress and guilt about the thoughts.

**Appendix 12:** Invitation letter sent to mothers on behalf of Virgin Care



Dear Madam,

I am writing to invite you to take part in a research study looking at 'Emotional Wellbeing Following Pregnancy'. This research study is being conducted by Royal Holloway University of London, specifically by Katrina Rumball, Trainee Clinical Psychologist, and Dr Abigail Wroe, Clinical Psychologist & Clinical Tutor. Virgin Care Services Limited (Children's Services) are not conducting the research but support the University with this research by inviting you to take part.

The research study consists of a questionnaire for you to complete. For further information please refer to the enclosed Participant Information Sheet. You will also find enclosed a consent form and a prize draw form for you to complete.

If you decide to participate, please return the consent form, prize draw form and questionnaire using the stamped addressed envelope provided in this pack by 6 weeks from the date you receive this information pack.

If you have any questions in relation to the research study, please contact Katrina Rumball at the Royal Holloway University of London on 01784 414 012.

Yours sincerely,

**Lorna Jamison, Clinical Lead – Runnymede 0 – 19 Universal Service,  
Fiona Whitaker, Clinical Lead – West Elmbridge 0-19 Universal Service**  
Virgin Care Services Limited



## Participant information sheet Emotional Wellbeing Following Pregnancy

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. Please take time to read this information sheet, which explains the study and what is involved.

### *What is the purpose of the study?*

The study aims to develop strategies and training for Health Visitors to help mothers with thoughts that they may be finding distressing following a new baby. This questionnaire forms part of a research project being completed within a Clinical Psychology training course.

### *Why have I been invited?*

You have been invited to take part because you live in an area where some Health Visitors have attended a new training course on emotional wellbeing. We are interested in experiences of Health Visitor appointments. We also want to find out about peoples' general wellbeing, including the kinds of thoughts women who have recently had a baby may have. All of the mothers in your local area that have had a baby within in the last few months have been invited.

### *Do I have to take part?*

Your participation (completion of the attached questionnaire) is entirely voluntary. If you do, or do not, decide to take part this will not effect the care you receive. If you decide *not* to take part, you do not need to do anything

### *What's involved?*

If you would like to take part this involves completing the consent form and the questionnaire in this pack. This should take about 10 minutes. You can also complete the voucher prize drawer form if you would like to be entered. Then please place these in the pre-paid return envelope and post to us. There will be no further involvement after this. If you would like to participate via phone please telephone 01784 414 012 and leave a message for Katrina Rumball who will then return your call. You can still be entered into the prize draw if you participate by phone.

### *Voucher Prize Drawer*

We are offering all participants (those who complete and return a questionnaire) the opportunity to enter into a prize draw for Boots vouchers. There will be several prizes from £5 to £25 (see prize draw sheet for details).

### *Will my taking part in the study be kept confidential?*

All information you provide will be kept confidential and we adhere to strict ethical and legal practice for data storage. Only the research team will have access to your data. You will notice that you do not need to provide your name on your questionnaire. Once we receive your questionnaire and consent form, these will be stored separately and we will then only use a participant identification key to refer to your data or to match this to your consent form if we need to.

### *Who has reviewed the study?*

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by Edgbaston West Midlands Research Ethics Committee. The project has also been reviewed and given ethical approval by Royal Holloway Research Ethics Committee.

### *Well-being*

We are aware that from the point of view of the individual filling in the questionnaires, they may be emotionally draining to complete. If at any stage you begin to feel you've had enough of the questions, or begin to feel upset by them, please do stop. If you wanted to return to them after a break that would be fine, or if you don't want to do any more, that would be equally fine. The top priority is your well-being.

It may be helpful to talk over thoughts you have while filling in questionnaires like this, with a friend or family member. You can also talk to your GP about your wellbeing. Equally, if you felt you'd like to talk over any thoughts you have while filling in the questionnaires, or afterwards, I'd be very happy to arrange a time to talk on the phone, as would Dr. Abigail Wroe. You can telephone 01784 414 012 for this purpose. Please note this is a voicemail service so you will need to specify that the message is for Katrina Rumball.

### *What will happen to the results of the research study?*

If you would like to be informed of the results, then please tick the box on the prize draw sheet below your address and we will send you a summary of the findings when the study is complete. The results will contribute to a doctorate thesis and are expected to be published in scientific journals. No data will be published that would identify any of the participants; the findings will describe an overall picture of what we find from the research.

### *Further Questions?*

If you would like to ask any questions about the project please telephone 01784 414 012. Please note this is a voicemail service so you will need to specify that the message is for Katrina Rumball.

**Thank-you** for your time and energy in having a look at them.

**Katrina Rumball, Trainee Clinical Psychologist, Royal Holloway University of London**  
**Dr. Abigail Wroe, Clinical Psychologist & Clinical Tutor, Royal Holloway University of London**

If you have any concerns about this study, please contact us on 01784 414 012 and we will do our best to resolve them. If you wish to complain formally, you can do this by contacting the study sponsor. The sponsor's representative is: Ms. Annette Lock, Department of Clinical Psychology, Royal Holloway, University of London, Egham, Surrey, TW20 0EX, email [Annette.Lock@rhul.ac.uk](mailto:Annette.Lock@rhul.ac.uk) telephone 07752014849. In the event that something does go wrong and you are harmed during the research and this is due to someone's negligence then you may have grounds to take legal action for compensation against Royal Holloway but you may have to pay your legal costs.

**Appendix 14:** Mother consent form

## CONSENT FORM

Research Study Title of Project: Emotional Wellbeing Following Pregnancy  
Name of Researcher: Katrina Rumball, Trainee Clinical psychologist, Royal Holloway

Please initial  
all boxes

• I confirm that I have read and understand the Participant information sheet dated 05/05/2014 (Version 2.1) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

• I understand that this Research Study is being conducted by Royal Holloway University of London only and I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.

• I agree to take part in the study

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

29/08/2014, Version 2.2

Emotional Wellbeing Following Pregnancy



# Prize Draw

We're offering  voucher prizes  
for completed questionnaires!  
... a treat to you or something for your baby.

**Win up to a £100 voucher!**

We are hoping to get approximately 100 completed questionnaires.  
From this the following vouchers can be won:

- 1 £100 Boots voucher
- 1 £50 Boots voucher
- 2 £25 Boots voucher
- 6 £10 Boots voucher



This gives you a 1 in 10 (approx.) chance of winning a voucher!

If you would like to be entered into the prize drawer please fill in your name or address below. This information will be stored separately from your questionnaire, ensuring confidentiality of your questionnaire answers.

Name \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If you would like to sent a summary of the results of the study via post when it is completed please tick this box

## Appendix 16: National Research Ethics Committee proportionate review approval



**NRES Committee West Midlands - Edgbaston**

The Old Chapel  
Royal Standard Place  
Nottingham  
NG1 6FS

Telephone: 0115 8839695

25 April 2014

Miss Katrina Rumball  
Trainee Clinical Psychologist  
NHS  
Department of Clinical Psychology  
Royal Holloway, University of London  
Egham, Surrey  
TW20 0EX

Dear Miss Rumball

<b>Study title:</b>	<b>HV training in psychologically informed approaches for Perinatal Obsessive Compulsive Disorder</b>
<b>REC reference:</b>	<b>14/WM/0148</b>
<b>Protocol number:</b>	<b>1</b>
<b>IRAS project ID:</b>	<b>152713</b>

Thank you for your email of 24 April 2014, responding to the Proportionate Review Sub-Committee's request for changes to the documentation for the above study.

The revised documentation has been reviewed and approved by the sub-committee.

We plan to publish your research summary wording for the above study on the NRES website, together with your contact details, unless you expressly withhold permission to do so. Publication will be no earlier than three months from the date of this favourable opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to withhold permission to publish, please contact the REC Manager, Miss Helen Wakefield, at [nrescommittee.westmidlands-edgbaston@nhs.net](mailto:nrescommittee.westmidlands-edgbaston@nhs.net)

### Confirmation of ethical opinion

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.

### **Ethical review of research 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).

### **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 within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

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 contest the need for registration they should contact Catherine Blewett ([catherineblewett@nhs.net](mailto:catherineblewett@nhs.net)), the HRA does not, however, expect exceptions to be made. Guidance on where to register is provided within IRAS.

**You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. The REC will acknowledge receipt and provide a final list of the approved documentation for the study, which can be made available to host**

**organisations to facilitate their permission for the study. Failure to provide the final versions to the REC may cause delay in obtaining permissions.**

**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).**

#### **Approved documents**

The documents reviewed and approved by the Committee are:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Covering Letter	(Email)	10 April 2014
Investigator CV	Katrina Rumball	
Letter of invitation to participant	2	24 April 2014
Other: Prize Draw	2	24 April 2015
Participant Consent Form	2	24 April 2014
Participant Information Sheet: Leaflet	2	24 April 2014
Participant Information Sheet: Information Sheet	2	24 April 2014
Protocol	2	24 April 2014
Questionnaire: Health Visitor	2	24 April 2014
Questionnaire: Mother	2	24 April 2014
REC application		03 April 2014
Response to Request for Further Information		

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

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

Further information is available at National Research Ethics Service website > After Review

<b>14/WM/0148</b>	<b>Please quote this number on all correspondence</b>
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We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at <http://www.hra.nhs.uk/hra-training/>

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

Yours sincerely



**Mr Paul Hamilton**  
**Chair**

Email: [nrescommittee.westmidlands-edgbaston@nhs.net](mailto:nrescommittee.westmidlands-edgbaston@nhs.net)

Enclosures:                    *"After ethical review – guidance for researchers"*

Copy to:                        *Ms. Annette Lock*



## Appendix 17: Recommendation for ethical approval from Sussex Research Consortium

From: "Vaughan Helen (Western Sussex Hospitals)"  
<Helen.Vaughan@wsht.nhs.uk>  
Subject: RE: R&D submission  
Date: 21 May 2014 15:03:35 BST  
To: "Rumball, Katrina (2012)" <Katrina.Rumball.2012@live.rhul.ac.uk>

Hi Katrina,  
Apologies for not letting you know sooner. I have passed your study to Virgin for their approval. I sent my recommendation for approval on the 19<sup>th</sup> May.  
Please do not begin any research activity at Virgin until you have received a formal approval letter from them.  
Regards,  
Helen

**Helen Vaughan**  
**Assistant Research Governance Manager**  
Sussex NHS Research Consortium

Research and Innovation  
Western Sussex Hospitals NHS Foundation Trust Worthing  
Hospital  
Lyndhurst Rd.  
Worthing  
BN11 2DH  
Internal extension: 84190 **\*\*Please note new extension number\*\***  
External Phone: 01903 205111 ext. 84190  
Fax: 01903 209884  
Email: [helen.vaughan@wsht.nhs.uk](mailto:helen.vaughan@wsht.nhs.uk)



[www.westernsussexhospitals.nhs.uk](http://www.westernsussexhospitals.nhs.uk)

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E-mails are not considered a secure medium for sending personal, sensitive or confidential information *outside the Trust network* unless encrypted and may therefore be at risk.

## Appendix 18: Ethical approval from Virgin Care ethics department



Katrina Rumball  
Trainee Clinical Psychologist  
Royal Holloway University of London  
Department of Clinical Psychology  
Egham  
Surrey  
TW20 OEX

**Virgin Care**  
Lynton House  
7-12 Tavistock Square  
London  
WC1H 9LT

**t:** 020 7380 1785  
**f:** 020 7380 1751

4 August 2014

Dear Katrina

**Ref: Clinical Psychology Doctorate at Royal Holloway University of London Research Proposal: HV training in psychologically informed approaches for Perinatal Obsessive Compulsive Disorder.  
ID: 1581/NOCI/2014**

The Research Governance Committee received confirmation from Lorna Jameson on the 28 July that Kathleen Ely as the Head of the business unit for Children's Services in Surrey approved the involvement of her health visitor teams at the following sites:

Virgin Care Ltd. – Egham Health Visitors, The Grove Community Health Centre  
Virgin Care Ltd. – Addlestone Health Visitors, Addlestone Health Centre  
Virgin Care Ltd. – Weybridge Health Visitors, Weybridge Primary Care Centre  
Virgin Care Ltd. – Walton Health Visitors, Walton Health Centre

**Please note that the above sites will not indemnify the main research site, the organisation managing the research or the participants in relation to the conduct or management of the research – this responsibility rests with the study sponsor**

Your research study proposal required both Virgin Care Limited and the Royal Holloway University to sign the letter of agreement dated 22 July and for copies of the Royal Holloway University Public Liability Certificate and Professional Indemnity Policy Schedule to be sent to Virgin Care Limited Legal Council before your study could be supported.

I am pleased to confirm that Virgin Care Limited Legal Counsel has confirmed to the Research Governance Committee that the letter of agreement has been signed by both parties and that the content meets the standard required from a legal perspective; the revised Letter of Invitation now makes clear that the research is being conducted by Royal Holloway University and copies of the University's Public Liability Certificate and Professional Indemnity Policy Schedule have been received.

A signed copy of the agreement letter is sent with this letter for your records.

Your research governance approval is valid providing you comply with the conditions set out below:

### Virgin Care

w: [www.virgincare.co.uk](http://www.virgincare.co.uk)

Registered office: Virgin Care Provider Services Ltd, Lynton House, 7-12 Tavistock Square, London WC1H 9LT.  
Registered in England and Wales: Number 07645492

Date: 04/08/2014 v1.0



1. You commence your research within one year of the date of this letter. If you do not begin your work within this time, you will be required to resubmit your application.
2. You notify the Consortium Office should you deviate or make changes to the approved documents.
3. You alert Kathleen Ely immediately, if significant developments occur as the study progresses, whether in relation to the safety of individuals or to scientific direction.
4. You comply fully with the Department of Health Research Governance Framework, and in particular that you ensure that you are aware of and fully discharge your responsibilities in respect to Data Protection, Health and Safety, financial probity, ethics and scientific quality. You should refer in particular to Sections 3.5 and 3.6 of the Research Governance Framework.
5. You ensure that all information regarding participants remains secure and strictly confidential at all times. You ensure that you understand and comply with the requirements of the NHS Confidentiality Code of Practice, Data Protection Act and Human Rights Act. Unauthorised disclosure of information is an offence and such disclosures may lead to prosecution.

At the end of the study the committee would be pleased to receive your research abstract and notified of its publication date.

Good luck with your work.

Regards

A handwritten signature in black ink, appearing to read "Peter Taylor".

Dr Peter Taylor  
Clinical Director and Chair of Virgin Care Research Committee

Enc: Copy of Letter of Agreement 22 07 14

Cc Kathleen Ely Head of Business Unit  
Lorna Jamison Clinical Lead Runnymede & Call to Action

**Virgin Care**

w: [www.virgincare.co.uk](http://www.virgincare.co.uk)

Registered office: Virgin Care Provider Services Ltd, Lynton House, 7-12 Tavistock Square, London WC1H 9LT.  
Registered in England and Wales: Number 07645492

Date: 04/08/2014 v1.0

## Appendix 19: Ethical approval from Royal Holloway ethics department

From: <Psychology-Webmaster@rhul.ac.uk>  
Subject: Ref: 2014/083 Ethics Form Approved  
Date: 28 July 2014 14:30:03 BST  
To: <nxjt002@rhul.ac.uk>, <abigail.wroe@rhul.ac.uk>  
Cc: <PSY-EthicsAdmin@rhul.ac.uk>, <Patrick.Leman@rhul.ac.uk>, <Annette.Lock@rhul.ac.uk>, <umjt001@rhul.ac.uk>

Application Details: View the form click [here](#) Revise the form click [here](#)

Applicant Name: **Katrina Rumball**

Application title: **Health Visitor training in psychologically informed approaches for Perinatal Obsessive Compulsive Disorder**

Comments: [Approved.](#)

Reviewers' comments for information.

Reviewer 1. The application is complete. I recommend approval subject to the final approval by Virgin Care legal and ethics dept.

Reviewer 2. Section B Q10 should be answered "Yes" for mothers, since they will complete scales and answer questions that could make them anxious or make them more aware of any OCD or other mental health issues they face. I refer the researchers and chair of the ethics panel to the wording of the info sheet for mothers - "...they may be emotionally draining to complete" !! I would also like to see a reminder to Ps that they can leave out any questions without giving a reason - on both the consent and info sheets.

## Appendix 20: Minor amendment approval



### Health Research Authority

#### NRES Committee West Midlands - Edgbaston

The Old Chapel  
Royal Standard Place  
Nottingham  
NG1 6FS

Tel: 0115 8839695

16 June 2014

Miss Katrina Rumball  
Trainee Clinical Psychologist  
NHS  
Department of Clinical Psychology  
Royal Holloway, University of London  
Egham, Surrey  
TW20 0EX

Dear Miss Rumball

<b>Study title:</b>	<b>HV training in psychologically informed approaches for Perinatal Obsessive Compulsive Disorder</b>
<b>REC reference:</b>	<b>14/WM/0148</b>
<b>Protocol number:</b>	<b>1</b>
<b>Amendment number:</b>	<b>1</b>
<b>Amendment date:</b>	<b>13 June 2014</b>
<b>IRAS project ID:</b>	<b>152713</b>

Thank you for your letter of 13 June 2014, notifying the Committee of the above amendment.

The Committee does not consider this to be a "substantial amendment" as defined in the Standard Operating Procedures for Research Ethics Committees. The amendment does not therefore require an ethical opinion from the Committee and may be implemented immediately, provided that it does not affect the approval for the research given by the R&D office for the relevant NHS care organisation.

#### Documents received

The documents received were as follows:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Letters of invitation to participant	2.1	05 May 2014
Notice of Minor Amendment [01]		13 June 2014
Other [HV Information Sheet for Training]	2	24 April 2014
Other [HV Information Sheet for those not trained]	2	24 April 2014
Participant consent form [HV Consent Form]	2	24 April 2014
Participant information sheet (PIS)	2.1	05 May 2014

**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.

<b>14/WM/0148:</b>	<b>Please quote this number on all correspondence</b>
--------------------	---

Yours sincerely



**Helen Wakefield**  
**REC Manager**

E-mail: [NRESCommittee.WestMidlands-Edgbaston@nhs.net](mailto:NRESCommittee.WestMidlands-Edgbaston@nhs.net)

Copy to: *Ms. Annette Lock,*

## Appendix 21: Approval for substantial amendment



### Health Research Authority

#### NRES Committee West Midlands - Edgbaston

The Old Chapel  
Royal Standard Place  
Nottingham  
NG1 6FS

Tel: 0115 8839697

20 October 2014

Miss Katrina Rumball  
Trainee Clinical Psychologist  
NHS  
Department of Clinical Psychology  
Royal Holloway, University of London  
Egham, Surrey  
TW20 0EX

Dear Miss Rumball,

<b>Study title:</b>	<b>HV training in psychologically informed approaches for Perinatal Obsessive Compulsive Disorder</b>
<b>REC reference:</b>	<b>14/WM/0148</b>
<b>Protocol number:</b>	<b>1</b>
<b>Amendment number:</b>	<b>2</b>
<b>Amendment date:</b>	<b>17 September 2014</b>
<b>IRAS project ID:</b>	<b>152713</b>

The above amendment was reviewed on 17 October 2014 by the Sub-Committee in correspondence.

#### Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

#### Approved documents

The documents reviewed and approved at the meeting were:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Notice of Substantial Amendment (non-CTIMP) [2]		17 September 2014
Other [Prize Draw Poster]	2.2	29 August 2014

#### Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

### **R&D approval**

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval of the research.

### **Statement of compliance**

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

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

<b>14/WM/0148:</b>	<b>Please quote this number on all correspondence</b>
--------------------	---

Yours sincerely,



**Mr Paul Hamilton**  
**Chair**

E-mail: NRESCommittee.WestMidlands-Edgbaston@nhs.net

Enclosures: *List of names and professions of members who took part in the review*

Copy to: *Ms. Annette Lock*



**NRES Committee West Midlands - Edgbaston**

**Attendance at Sub-Committee of the REC meeting on 17 October 2014**

**Committee Members:**

<i>Name</i>	<i>Profession</i>	<i>Present</i>	<i>Notes</i>
Mr Paul Hamilton	Retired Local Government Officer (Chair)	Yes	
Miss Heather Small	Heart Study Co-ordinator	Yes	

**Also in attendance:**

<i>Name</i>	<i>Position (or reason for attending)</i>
Ms Rachel Nelson	REC Assistant

**Appendix 22:** Health visitor data details of skewness and kurtosis

**Table 5.6:** Skew and kurtosis and respective z scores for the scaled questions on the OCD contamination and the PND vignettes pre-training

	OCD Contamination Referral	OCD Contamination Safeguarding	OCD Contamination Confidence	PND Referral	PND Safeguarding	PND Confidence
Skewness	0.21	0.59	-0.63	-0.64	0.68	-0.49
Std. Error of Skewness	0.46	0.46	0.46	0.46	0.46	0.47
Z Skewness	0.46	1.27	-1.36	-1.37	1.46	-1.03
Kurtosis	-1.30	-0.98	-0.24	-0.59	0.05	-0.61
Std. Error of Kurtosis	0.89	0.90	0.90	0.90	0.90	0.92
Z Kurtosis	-1.21	-1.04	-0.52	-0.81	0.24	-0.81

**Table 5.7:** Skew and kurtosis and respective z scores for the scaled questions on the Obscure Harm and OCD Harm vignettes pre-training

	Obscure Harm Referral	Obscure Harm Safeguarding	Obscure Harm Confidence	OCD Harm Referral	OCD Harm Safeguarding	OCD Harm Confidence
Skewness	-4.07	-1.88	-0.03	-1.14	-1.20	-0.10
Std. Error of Skewness	0.46	0.46	0.46	0.46	0.47	0.46
Z Skewness	-8.76	-4.04	-0.05	-2.45	-2.53	-0.22
Kurtosis	17.74	2.76	-0.66	0.75	1.16	-0.67
Std. Error of Kurtosis	0.90	0.90	0.90	0.90	0.92	0.90
Z Kurtosis	4.43	1.75	-0.86	0.90	1.12	-0.86

For variables shown in Table 5.6 and 5.7 no outliers were found so no winsorising of scores were completed.

**Table 5.8:** Skew and kurtosis and respective z scores for the scaled questions on the OCD contamination and the PND vignettes post-training

	OCD Contamination Referral	OCD Contamination Safeguarding	OCD Contamination Confidence	PND Referral	PND Safeguarding	PND Confidence
Skewness	-0.42	1.56	-0.71	0.03	1.47	-0.75
Std. Error of Skewness	0.46	0.46	0.46	0.46	0.46	0.46
Z Skewness	-0.92	3.41	-1.55	0.07	3.21	-1.63
Kurtosis	-1.61	1.39	-0.22	-1.72	1.44	-0.17
Std. Error of Kurtosis	0.89	0.89	0.89	0.89	0.89	0.89
Z Kurtosis	-1.35	1.25	-0.50	-1.39	1.27	-0.44

**Table 5.9:** Skew and kurtosis and respective z scores for the scaled questions on the Obscure Harm and OCD Harm vignettes post-training

	Obscure Harm Referral	Obscure Harm Safeguarding	Obscure Harm Confidence	OCD Harm Referral	OCD Harm Safeguarding	OCD Harm Confidence
Skewness	-1.06	0.32	-0.33	-1.58	0.54	-0.53
Std. Error of Skewness	0.46	0.46	0.48	0.46	0.46	0.46
Z Skewness	-2.32	0.69	-0.68	-3.46	1.18	-1.17
Kurtosis	1.24	-1.10	-0.84	2.86	-0.21	0.12
Std. Error of Kurtosis	0.89	0.89	0.94	0.89	0.89	0.89
Z Kurtosis	1.18	-1.11	-0.95	1.79	-0.49	1.35

Following winsorising of outliers for these variables, Table 5.8 and 5.9 display the new figures for skewness and kurtosis.

**Table 5.10:** Skew and kurtosis and respective z scores for the scaled questions on the OCD contamination and the PND vignettes post-training

	OCD Contamination Referral	OCD Contamination Safeguarding	OCD Contamination Confidence	PND Referral	PND Safeguarding	PND Confidence
Skewness	-0.42	1.56	-0.71	0.03	1.47	-0.75
Std. Error of Skewness	0.46	0.46	0.46	0.46	0.46	0.46
Z Skewness	-0.92	3.41	-1.55	0.07	3.21	-1.63
Kurtosis	-1.61	1.39	-0.22	-1.72	1.44	-0.17
Std. Error of Kurtosis	-1.61	1.39	-0.22	-1.72	1.44	-0.17
Z Kurtosis	-0.89	0.89	-0.89	-0.89	0.89	-0.89

**Table 5.11:** Skew and kurtosis and respective z scores for the scaled questions on the Obscure Harm and OCD Harm vignettes post-training

	Obscure Harm Referral	Obscure Harm Safeguarding	Obscure Harm Confidence	OCD Harm Referral	OCD Harm Safeguarding	OCD Harm Confidence
Skewness	-1.06	0.32	-0.33	-1.19	0.54	-0.53
Std. Error of Skewness	0.46	0.46	0.48	0.46	0.46	0.46
Z Skewness	-2.32	0.69	-0.68	-2.60	1.18	-1.17
Kurtosis	1.24	-1.10	-0.84	-1.19	-0.21	0.12
Std. Error of Kurtosis	1.24	-1.10	-0.84	-1.19	-0.21	0.12
Z Kurtosis	0.89	-0.89	-0.94	-0.89	-0.89	0.89

Skewness and kurtosis were then examined for the questions on intrusion prevalence and confidence, these are shown in Table 5.10 and 5.11.

**Table 5.12:** Skew and kurtosis for intrusions percentages and confidence pre-training

	Pre-training										
	Q1a	Q1b	Q2a	Q2b	Q3a	Q3b	Q4a	Q4b	Q5	Q6a	Q6b
Skewness	-0.69	0.14	0.62	0.07	0.01	-0.23	0.96	0.38	0.04	0.78	-0.67
Std. Error of Skewness	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Z Skewness	-1.51	0.30	1.37	0.14	0.02	-0.51	2.11	0.82	0.09	1.68	-1.45
Kurtosis	-0.68	-0.99	-0.59	-0.44	-1.49	-0.34	-0.37	-0.76	-1.64	-0.16	-0.48
Std. Error of Kurtosis	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.90
Z Kurtosis	-0.88	-1.06	-0.82	-0.71	-1.30	-0.62	-0.64	-0.92	-1.36	-0.42	-0.73

**Table 5.13:** Skew and kurtosis for intrusions percentages and confidence post-training

	Post-training										
	Q1a	Q1b	Q2a	Q2b	Q3a	Q3b	Q4a	Q4b	Q5	Q6a	Q6b
Skewness	-0.85	-0.27	-0.62	-1.22	-0.56	-1.04	0.03	-0.38	-0.70	-0.11	-0.47
Std. Error of Skewness	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Z Skewness	-1.87	-0.59	-1.36	-2.67	-1.23	-2.27	0.07	-0.83	-1.53	-0.25	-1.03
Kurtosis	-0.26	-1.09	-0.50	2.65	-1.12	1.90	-1.22	0.53	-0.83	-1.05	-0.79
Std. Error of Kurtosis	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.89	0.89	0.89	0.89
Z Kurtosis	-0.55	-1.11	-0.75	1.73	-1.12	1.46	-1.16	0.77	-0.97	-1.09	-0.94

Outliers were winsorised. Tables 5.12 and 5.13 show the new figures for skewness and kurtosis.

**Table 5.14:** Skew and kurtosis for intrusion prevalence and confidence pre-training following winsorising outliers

	Pre-training										
	Q1a	Q1b	Q2a	Q2b	Q3a	Q3b	Q4a	Q4b	Q5	Q6a	Q6b
Skewness	-0.69	0.14	0.62	0.07	0.01	-0.23	0.96	0.38	0.04	0.78	-0.68
Std. Error of Skewness	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Z Skewness	-1.51	0.30	1.37	0.14	0.02	-0.51	2.11	0.82	0.09	1.68	-1.45
Kurtosis	-0.68	-0.99	-0.59	-0.44	-1.49	-0.34	-0.37	-0.76	-1.64	-0.16	-0.48
Std. Error of Kurtosis	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.90
Z Kurtosis	-0.88	-1.06	-0.82	-0.71	-1.30	-0.62	-0.64	-0.92	-1.36	-0.42	-0.73

**Table 5.15:** Skew and kurtosis for intrusion prevalence and confidence post-training following winsorising outliers

	Post-training										
	Q1a	Q1b	Q2a	Q2b	Q3a	Q3b	Q4a	Q4b	Q5	Q6a	Q6b
Skewness	-0.85	-0.03	-0.62	-0.37	-0.56	-0.13	0.03	-0.38	-0.70	-0.11	-0.47
Std. Error of Skewness	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Z Skewness	-1.87	-0.59	-1.36	-0.81	-1.23	-0.27	0.07	-0.83	-1.53	-0.25	-1.03
Kurtosis	-0.26	-1.09	-0.50	-0.55	-1.12	-1.10	-1.22	0.53	-0.83	-1.05	-0.79
Std. Error of Kurtosis	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.89	0.89	0.89	0.89
Z Kurtosis	-0.55	-1.11	-0.75	-0.78	-1.12	-1.11	-1.16	0.77	-0.97	-1.09	-0.94

**Appendix 23:** Diagnosis breakdown of pre-training responses for potential diagnosis for each vignette compared between group

**Table 5.16:** chi square of diagnosis comparing groups pre-training

	Group	OCD	PND	Anxiety	Psychosis	Accurate regarding OCD
<b>OCD</b>	1	13	1	4	0	13/14
<b>Contamination</b>	2	7	3	3	0	7/8
<b>OCD Harm</b>	1	0	12	2	1	0/12
	2	0	8	2	1	0/8
<b>PND</b>	1	0	15	0	0	15/15
	2	1	9	5	1	8/9
<b>Obscure Harm</b>	1	0	15	0	2	15/15
	2	0	9	1	2	9/9

**Appendix 24:** Mother data details of skewness and kurtosis

**Table 5.17:** Results on skewness, kurtosis and respective z scores for each of the continuous variables for mother data by group.

Group	Data	Q2	Q3	Q5	Q6	Q7	Q8	DASS Total	DASS D	DASS A	DASS S	Mother Age	Baby days
Control	Kurtosis	-0.52	0.16	-0.10	-0.04	-0.15	-0.066	6.63	6.64	10.19	1.99	0.51	0.30
	Std. Error of Kurtosis	0.63	0.64	0.63	0.63	0.64	0.64	0.63	0.63	0.63	0.63	0.63	0.63
	Z Kurtosis	-0.91	0.50	-0.40	0.25	0.62	1.09	3.23	3.24	4.01	1.77	0.90	0.69
	Skewness	0.70	-0.65	0.36	0.14	0.05	-0.02	2.33	2.39	3.02	1.30	0.07	0.77
	Std. Error of Skewness	.032	0.33	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
	Z Skewness	2.16	-1.99	1.11	0.33	0.10	-0.55	7.23	7.44	9.37	4.03	0.20	2.39
Experimental	Kurtosis	-1.18	-0.83	-0.82	-0.67	-0.85	-0.99	0.64	8.45	1.36	0.98	-0.10	-0.09
	Std. Error of Kurtosis	0.66	0.66	0.66	0.66	0.67	0.67	0.66	0.66	0.66	0.66	0.66	0.66
	Z Kurtosis	-1.33	-1.13	-1.12	0.98	1.22	1.20	0.99	3.59	1.44	1.23	-0.38	-0.37
	Skewness	0.20	-0.10	.040	0.30	0.48	0.48	0.96	2.44	1.34	0.77	-0.06	0.34
	Std. Error of Skewness	0.34	0.33	0.33	0.34	0.34	0.35	0.33	0.33	0.33	0.33	0.33	0.33
	Z Skewness	0.61	-0.29	1.19	0.90	1.43	1.77	2.87	7.32	4.03	2.30	-0.17	1.01

Outliers were found for the DASS-21 and its three subscales. These were winsorised and new results for skewness and kurtosis are shown in Table 5.18.



**Table 5.18:** Skewness, kurtosis and respective z scores for the DASS-21 and its three subscales following winsorising of outliers.

Group	Data	DASS Total	DASS D	DASS A	DASS S
Control	Kurtosis	1.20	0.84	4.40	0.37
	Std. Error of Kurtosis	0.64	0.64	0.64	0.64
	Z Kurtosis	1.37	1.15	2.63	0.76
	Skewness	1.27	1.38	2.05	0.92
	Std. Error of Skewness	0.33	0.33	0.33	0.33
	Z Skewness	3.91	4.24	6.31	2.82
Experimental	Kurtosis	0.23	3.55	0.42	0.58
	Std. Error of Kurtosis	0.66	0.66	0.66	0.66
	Z Kurtosis	0.60	2.33	0.80	0.94
	Skewness	0.82	1.74	1.16	0.66
	Std. Error of Skewness	0.33	0.33	0.33	0.33
	Z Skewness	2.47	5.22	3.49	1.97

As some of these results were still skewed transformations were conducted, the new results are shown in Table 5.19.

**Table 5.19:** Kurtosis, skewness and respective z scores for the DASS-21 and its three subscales following transformation.

Group	Data	DASS Total	DASS D	DASS A	DASS S
Control	Kurtosis	-0.01	-1.05	-0.61	-0.12
	Std. Error of Kurtosis	0.64	0.64	0.64	0.64
	Z Kurtosis	-1.19	-0.83	-0.79	-0.94
	Skewness	.13	0.40	0.70	-0.23
	Std. Error of Skewness	0.33	0.33	0.33	0.33
	Z Skewness	0.34	1.28	0.97	-0.43
Experimental	Kurtosis	-0.25	-1.02	-1.38	0.62
	Std. Error of Kurtosis	0.66	0.66	0.66	0.66
	Z Kurtosis	-0.39	-1.23	-2.16	0.71
	Skewness	-0.18	0.55	0.37	-0.65
	Std. Error of Skewness	0.33	0.33	0.33	0.33
	Z Skewness	-1.08	0.79	0.83	-0.84

**Appendix 25:** Time since mother last saw health visitor compared between groups

**Table 5.20:** Details of the observed values and group comparison for the time mothers last saw their health visitor

<b>Last seen HV</b>	<b>Control Group</b>	<b>Experimental Group</b>	<b>Group Comparison</b>
<b>1 week</b>	19/54 (35.19%)	11 (21.57%)	$\chi^2[3]=3.33, p=0.34$
<b>2 weeks</b>	14/54 (25.93%)	19 (37.25%)	
<b>1 month</b>	17/54 (31.48%)	15 (29.41%)	
<b>More than 1 month</b>	4/54 (7.41%)	6 (11.76%)	

**Appendix 26:** Descriptive data on ethnicities of mother participants

**Table 5.21:** Details of ethnicity of mother participants

<b>Ethnicity</b>	<b>n (%)</b>
White British	83 (79.05%)
White Irish	5 (4.76%)
Any other White background	9 (8.57%)
White and Asian	1 (0.95%)
Chinese	2 (1.90%)
Any other ethnic group	2 (1.90%)
Indian	1 (0.95%)
Pakistani	1 (0.95%)
Any other Asian background	1 (0.95%)

**Appendix 27:** Other categories provided in the PTBC

**Table 5.22:** List of the ‘other’ intrusions and compulsions stated by participants in their questionnaires. Please note: some participants cited more than one intrusion so these are listed separately.

<b>‘Other’ intrusions</b>	<b>‘Other’ compulsions</b>
Something bad happening to me or my partner (2)	Looking on internet (4)
Weight gain (2)	Positioning child in different positions and different areas (1)
Forgetting to change / feed baby (1)	
Baby being taken by stranger in public or someone breaking into home to take baby (1)	
<b>B</b> reastfeeding co-sleeping (1)	
Baby choking (1)	
Baby too cold (1)	
Baby not enough food (1)	
General concern for wellbeing (1)	
He is wiggly so I worry about entanglement (1)	
He will forget to breath (1)	
Loosing limbs (1)	
Brain development (1)	

**Appendix 28:** Group comparisons of DASS-21 scores.

**Table 5.23:** Mean scores for the DASS-21 and its three subscales (Depression, Anxiety, Stress) across the two groups

<b>Measure</b>	<b>Control</b>	<b>Experimental</b>	<b>Group Comparisons</b>
	<b>Mean (s.d)</b>	<b>Mean (s.d)</b>	
<b>DASS-21</b>	7.39(6.30)	7.41(5.43)	t(103)=-0.24, p=0.81 <sup>1</sup>
<b>Depression</b>	1.43(1.81)	1.10(1.51)	t(103)=1.03, p=0.31 <sup>1</sup>
<b>Anxiety</b>	1.09(1.63)	1.31(1.64)	t(103)=-0.70, p=0.49 <sup>1</sup>
<b>Stress</b>	4.90(3.77)	5.00(3.19)	t(103)=-0.42, p=0.68 <sup>1</sup>

<sup>1</sup> group comparisons conducted on transformed scores