An Investigatory Study of the Relationship Between Parental Attachment, Personality and Mindful Attention in Adults

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Abstract

This study examines the relationship between Parental Attachment and levels of Neuroticism, Psychoticism, and Mindful attention. A random sample of 80 participants aged 18 to 35 years living in Ireland completed a questionnaire which incorporated the Inventory of Parent and Peer Attachment (IPPA) questionnaire, the Eysenck Personality Questionnaire Revised (EPQ-R) short version, and the Mindful Attention Awareness Scale (MAAS), including a question on gender. Partly correlational, partly quasi-experimental design was employed. The independent variable was Parental Attachment (with subscales of Mother and Father Attachment) and the dependent variables were Neuroticism, Psychoticism, Mindfulness, also Extraversion. A weak positive correlation was found between Father Attachment and Neuroticism ($r=-0.234$, $p<0.05$, 2-tailed), Parental Attachment and Mindful attention ($r=0.254$, $p<0.05$, 2-tailed), and also Mother Attachment and Mindful attention ($r=0.287$, $p<0.01$, 2-tailed). The study concludes that Parental Attachment does influence personality development and mindful awareness.
Introduction

The area of human attachment, particularly, parental attachment has been intriguing many researchers and practicing psychologists for at least last fifty years. Various theorists made attempts to determine not only the existing ways and patterns of child-parent attachment formation, but also effects of these attachments on later life; Bowlby (1969, 1982) and Ainsworth (1978) among them.

Adult personality is another area of interest, where meaningful contributions were made by such trait theorists as Eysenck (PEN theory in 1990) and Costa & McCrae (Big Five theory in 1992) who studied human personality in depth, and developed widely used personality questionnaires. In relation to attachment, some explorations on its effect on the child personality later in life were developed, which showed a trend of significant influence of attachment on personality.

Finally, the recently popular area of popular psychology, that is mindfulness, currently attracts attention not only of theorists within the popular psychology field, but also within the scientific psychology. Mindfulness, as described in Black (2011), which initially meant an awareness of the present moment, of internal thoughts, feelings, bodily sensations and those of external reality, in non-judgemental manner, now entered the scientific mainstream as an inherent quality of human consciousness, a capacity of attention and awareness oriented to the present moment. It became popular on the scientific stage in part through the work of Kabat-Zinn and his Mindfulness-Based Stress Reduction (MBSR) program, launched at the University of Massachusetts Medical School in 1979. Since that time, many studies
have documented the physical and mental health benefits of mindfulness in general and of MBSR in particular, in various settings.

In order to understand each of these three areas of the present research, it is essential to examine each of them in more detail.

Early attachment theorists (Bowlby, 1969, 1982; Ainsworth, 1978; as cited in Crain, 2005) viewed disturbed parent-child interaction as a substantial factor in child’s subsequent emotional problems and impaired cognitive functioning. And respectively, according to Weinfield, Sroufe, Egeland, & Carlson (1999; as cited in Kochanska, 2001), securely attached infants demonstrated the healthiest pattern of development at a later stage in their lives. As noted by Howe (2011), if insecure attachment patterns continue into adulthood, individuals remain vulnerable and at increased risk of poor mental health; whereas, secure caregivers help babies regulate their bodies as well as their minds. Initially, the main focus was on mother-child attachment, where secure attachment was the product of maternal sensitivity to children’s signals and needs (Ainsworth, 1978; as cited in Crain, 2005). Also, Bowlby pointed out that quality of mother-child attachment plays a major role in child’s future personality (Bowlby, 1988; as cited in Crain, 2005). Bowlby was interested in the effects of early separation from parents on personality development, and suggested the existence of a psychological system, specifically dedicated to parent-child relationships, called attachment behavioural system (ABS). According to him, ABS motivates children to seek comfort and security from adults. During their development infants attempt to gain a greater sense of security in relationships with adults, thus they provide a ‘secure base’ from where to explore the environment
(as cited in Cervone & Pervin, 2007). As Bowlby proposed further, during the process of developing attachment in child-parent relations, a child creates symbolic mental representations of self and caregivers, or internal working models. And these internal working models represent the individual differences; thus, different infants would exhibit different types of interactions with significant others, or different attachment styles.

Also, during the attachment formation between an infant and a caregiver, not only representations of the self and other are created, but also ‘strategies for processing attachment-related thoughts and feelings; and when they adopt strategies that compromise realistic appraisals, they become more vulnerable to psychopathology’ (Dozier, Stovall-McClough, & Albus, 2008, p.718). Thus, depending on the relationships with caregivers, the strategies they adopt when coping with their conflicts and distress are either secure or insecure.

Ainsworth (1978, as cited in Crain, 2005) significantly contributed to the work of Bowlby with her ‘Strange Situation’ procedure, where she conducted direct behavioural observation of parent-child interactions. To her this was more reliable and convincing method than just to ask parents about their interactions with children. She has found out that about 70 percent of infants were ‘securely’ attached (sensitive to the departure of the mother, but greeted her when returned, were comforted readily and able to return to exploration when reunited), about 20 percent were labelled as ‘anxious-avoidant’ (characterised by little protest over separation and avoidance of her upon return), and about 10 percent were classified as ‘anxious-ambivalent’ (separating was difficult for such infants, and behaviour inconsistent
upon return of the mother). The Strange Situation paradigm provided a good insight into psychodynamic processes in a child development, but was unclear, for example, which aspects of mother-child interactions predict a secure attachment style. Some researchers suggest the maternal sensitivity is the greatest predictor (Goldsmith and Alansky, 1987; as cited in Carlson, Martin, & Buskist, 2004), but others show different factors. For example, De Wolff and van Ijzendoorn (1997; as cited in Carlson, Martin, & Buskist, 2004) conducted a meta-analysis of 66 attachment studies and found that there was a moderately strong relationship between maternal sensitivity (as ability to respond appropriately and quickly to the signals of the infant) and better attachment patterns. But they also found that other factors influenced the attachment, such as the ability to behave synchronously, co-ordinated play, positive mood, stimulation and emotional support.

Both psychoanalytical theorists (Erikson, 1963; Freud, 1905/1930) and ethologists (Bowlby, 1969) have argued that ‘the feelings of warmth, trust, and security that infants derive from healthy attachments will set the stage for adaptive psychological functioning later in life’. (as cited in Shaffer, 1994, p.186)

As indicated in Carlson, Martin, & Buskist (2004), determinants of attachment may be unclear because different studies adopt different approaches – from interviewing to observing, and this may affect the outcomes of the studies.

At the same time, there were conducted studies that suggest the influence of attachment on children’s later social behaviour. It was found that children who were securely attached at 15 months were among the most popular and the most sociable
children in their nursery schools at three and a half years of age. In contrast, insecurely attached infants had a difficulty with social adjustment later in childhood; they had poor social skills and tended to be hostile, impulsive and withdrawn (Waters et al., 1979; Erickson et al., 1985; cited in Carlson, Martin, & Buskist, 2004).

According to Bowlby (as cited in Fraley, 2010), attachment is a necessary experience not only in infancy, but stems ‘from the cradle to the grave’. He suggested that an early attachment in infancy has its effect on attachments later in life.

Further, as the research on the area of attachment progressed, adult attachment started to be examined; first, as an adult’s representation of their memories of attachment with their parents, for example, Adult Attachment Interview (AAI), developed by George, Kaplan, and Main (1985; as cited in de Haas, Bakermans-Kranenburg, & van Ijzendoorn, 1994) where interviews would be conducted for participants to reflect on their own childhood attachment experiences. However, the authors admitted that there are two types of information – consciously easily accessible and not an easily accessible one, and only a longitudinal study could show if this self-reported, self-reflected information is accurate, for example, if to conduct a study with 1-year-olds first, and then with the same participants 20 years later.

Another approach to adult attachment is to measure it with significant people in adulthood, whether their parents, friends, or partners (Hazan and Shaver, 1987; Shaver and Clark, 1994; Bartholomew, 1990; Bartholomew and Horowitz, 1991;
Armsden and Greenberg, 1987, 2009; as cited in Fraley, 2010). For example, Bartholomew and Horowitz have developed a Relationship Questionnaire (1991), used mostly with romantic partners, or just the closest person. Here two important issues arise in relation to this approach to attachment: (1) How similar is the security in attachment that people experience with different figures in their lives (e.g., mothers, fathers, romantic partners); and (2) How stable are the relationships in terms of security over time. In regards to the first issue, Fraley (2010), for example, collected self-report measures of participants’ current attachment style with significant parental figures and current romantic partners and found correlations ranging between approximately 0.20 to 0.50 (i.e., small to moderate) between the two kinds of attachment relationships. In relation to the second issue, according to Fraley (2002, as cited in Fraley, 2010), the stability of attachment to parents has a correlation of about 0.25 to 0.39. However, the only longitudinal study known, where attachment to parents was assessed at the age of 1 year (Strange Situation) and then, 20 years later, attachment of the same people to romantic partners was examined; and the correlation found was 0.17 between these two variables (Steele, Waters, Crowell, & Treboux, 1998; as cited in Fraley, 2010).

However, the present research is concerned primarily with parental attachment, not with that in infancy, as it might not be accurate if provided as a self-report, but with the attachment of young adults to their parents. First of all, it is more reliable than if participants tried to remember their childhood attachment quality; second, even if in childhood this attachment was less secure than in adulthood, this may shape also current romantic relationships and the personality of participants, that is why the report with more recent situation is preferable; finally, as the human
personality traits tend to be endure, it is likely that the quality of attachment between grown-up children and their parents is similar to that in infancy (referring to Fraley, mentioned above). Indeed, Bowlby (1988) proposed that, ‘once formed, a working model of relationships may stabilise (becoming a part of personality) and thereby continue to influence the character of a person’s close emotional ties throughout life’ (as cited in Shaffer, 1994). As findings of Kobak & Sceery (1988; as cited in Shaffer, 1994) show, college students who recalled their own early attachment relationships as stable and secure were rated less anxious and less hostile by peers, and reported lower levels of loneliness and personal distress, than classmates who described their early attachment histories as insecure. This means that effects of attachment quality can be observed in adulthood. However, as mentioned by Fagot & Kavanagh (1990), ‘secure attachment histories are not guarantee of positive adjustment later in life; nor are insecure early attachments a certain indicator of poor life outcomes’ (as cited in Shaffer, 1994). Finally, Shaffer (1994) showed that even though research consistently indicates that people with early history of secure attachments are more socially skilled and intellectually competent later in life than their counterparts with insecure attachment histories; children’s working models of attachment relationships can change over time. Therefore, to ensure there is a correct correlation between most recent parental attachment and personality outcome, the young adulthood attachment will be measured in this paper.

It is not worth to look at the attachment pattern alone if it does not show any implication on people’s life. Therefore, first, the area of parental attachment will be discussed in conjunction with a personality aspect of individuals. Here, it is important to mention that approaches to measuring personality also differ
significantly. First influential approach is that of Eysenck, who developed the *Three-Factor theory of personality*, called *PEN*. Within this theory (as cited in Cervone & Pervin, 2007; Ryckman, 2008), Eysenck identified three superfactors of personality labelled as follows: introversion-extraversion, neuroticism (alternatively called emotional stability versus instability), and psychoticism (low versus high impulse control). In this theory, concept of extraversion organises such lower-level traits as sociability, activity, liveliness, assertiveness, sensation-seeking, dominance, and excitability; neuroticism organises traits such as anxiety, depressiveness, feeling guilty, low self-esteem, tension, irrationality, shyness, moodiness, and emotionality; and psychoticism organises personality traits that, in extreme, can be labelled as ‘abnormal’: aggressiveness, a lack of empathy, interpersonal coldness, egocentrism, impulsiveness, tough-mindedness, and antisocial behavioural tendencies.

Eysenck’s PEN theory of personality along with its popularity has also some limitations. It is questionable whether three dimensions are enough to describe a person; maybe two or three more factors are needed, for example, honesty, reliability, creativity, which do not fit in his system easily. Also, alternative two- and three-dimensional models have been proposed to fit better for describing biologically-based individual differences, for example, the dimensions of impulsivity and anxiety, rather than extraversion and neuroticism (Gray, 1990; as cited in Cervone & Pervin, 2007). But this particular limitation is an advantage for the present research: Eysenck’s PEN theory of personality lacks consistent support for the biological bases of personality traits – neuroticism and psychoticism, which allows an assumption that these traits at least to some extent are influenced by environment, in particular, by parents – how they treat their children. If these traits
were purely biological, attachment wouldn’t play a role in their formation. Thus, the Eysenck’s PEN model will be used in this paper, with an attempt to determine whether there is a correlation between parental attachment and the aspects of personality, discussed in Eysenck’s PEN.

Another trait theory of personality to mention is that of Costa and McCrae (1992, as cited in Cervone & Pervin, 2007), the Big Five, or five-factor, a model that emphasises the biological basis of traits; and the suggested traits are: neuroticism, extraversion, openness, agreeableness, and conscientiousness. One of the limitations of this model is that it offers no specific recommendations concerning the process of personality change. Thus, this model does not consider flexibility of the personality shaped by environment.

The third aspect examined in this research is mindfulness, a relatively new area in the scientific psychology, which as various studies show, has a considerable influence on human lives. According to Kabat-Zinn (not dated), this is good to fight off illness; to cope with stress and depression; to enhance learning, for emotion regulation, and empathy; to improve memory and attention; to enhance relationships; to improve parenting skills; to reduce negative emotions; to increase awareness of one’s thoughts and emotions; to fight obesity; to reduce PTSD symptoms; and many more.

One of the central figures who can be considered a founder of mindfulness science is Kabat-Zinn, who defined mindfulness as, ‘paying attention in a particular way: on purpose, in the present moment, and non-judgementally’ (Kabat-Zinn, 1994;
cited in Black, 2011), proposed that mindfulness is characterised by attention and awareness. This concept was given a serious attention by the scientific community only when it was translated into the measurable terms. In 2003, a series of psychometric development studies provided the first valid and reliable measure of dispositional mindfulness called the *Mindful Attention Awareness Scale*, which will be used in this paper. Also, other measures were developed, such as: Kentucky Inventory of Mindfulness Skills (KAMS), Toronto Mindfulness Scale (TMS), Cognitive and Affective Mindfulness Scale (CAMS), Five Facet Mindfulness Questionnaire (FFMQ), Freiburg Mindfulness Inventory (FMI), and the Philadelphia Mindfulness Scale (PHLMS) – these made it possible to study mindfulness scientifically (Black, 2011). However, mindfulness is still at the very early stage of scientific exploration and understanding, which leaves a broad field for further research and establishing of correlations.

Also, as Bishop et al. (2004) have described it, recently there appeared a substantial interest in mindfulness as an approach ‘to reduce cognitive vulnerability to stress and emotional distress’. Therefore, mindful attention can be not only a result of certain attachment pattern or personality type, but also used as a coping strategy in extremes of neuroticism and psychoticism, for example. This is good to bear in mind while discussing correlations.

Before proceeding with the study that fits within the previous research and fills in the gaps, the necessary review of previous research is required. The relationship found between attachment and personality, as well as correlations between attachment and attention ability have to be closely examined. In this paper, in order
to base mindfulness on the existing research background, it will be considered as a
type of attention which is more specific and more purpose-directed than the original
term of attention.

Upon reviewing research studies that examined the relationship between adult
attachment and personality, some consistent preliminary support was obtained by a
number of studies for the hypothesis that insecure attachment is associated with
personality issues, e.g., anxiety, depression, negative affect, impulsivity, high
neuroticism, and a number of personality disorders; whereas secure attachments
associated with higher self-concept and positive emotionality, lower negative
emotionality and constraint.

For example, Surcinelli, Rossi, Montebarocci, Baldaro (2010) assessed
attachment styles, anxiety, depression, and personality traits among 274 adult
volunteers. Participants were classified into the four attachment groups (secure,
preoccupied, fearful, and dismissing-avoidant) according to K. Bartholomew's
(1990) model. The present authors found that the participants with attachment styles
involving a negative self-model showed significantly higher symptoms of anxiety
and depression than the participants with attachment styles characterized by a
positive self-model. Thus, the results of this study indicated that secure attachment in
adults was associated with better mental health, while insecure attachment styles
characterised by negative thinking about the self were associated with higher
depression and anxiety scores.
Scott, Levy, and Pincus (2009) have conducted a cross-sectional study to compare the two models of the relationship features between adult attachment patterns, trait negative affect and impulsivity, and BPD (Borderline Personality Disorder) in a large nonclinical sample of young adults. They have found that attachment anxiety and avoidance were positively related to trait negative affect and impulsivity, which in turn, were directly associated with BPD features; and trait negative affect and impulsivity were positively related to attachment anxiety and avoidance, which in turn, were directly associated with BPD features. However, only attachment anxiety, and not attachment avoidance, was significantly associated with negative affect and impulsivity.

Another study conducted by Brennan and Shaver (1998) on a nonclinical group of 1407 individuals, mostly adolescents and young adults, who were surveyed about their attachment styles, parental marital status, parental mortality status, perceptions of treatment by parents in childhood, and 13 personality disorders. They discovered a significant overlap between attachment and personality-disorder measures. Only such personality disorder as psychopathy appeared unrelated to attachment. Other personality disorders and attachment styles were associated with family-of-origin variables. Results supported the idea that insecure attachment and most of the personality disorders share similar developmental antecedents.

Cassidy & Shaver (2008) have collected the data from a range of research in relation to parental attachment and a number of various disorders. The research shows that there exists a correlation between problematic relationships with caregivers and such disorders as borderline personality disorder; unipolar disorders
that are not very severe (Moldin, Reich, & Rice, 1991; as cited in Cassidy & Shaver, 2008); depression, model of the self as a failure, perceiving themselves as incompetent and unlovable and others as unloving (Bowlby, 1980; Fonagy, 1996; as cited in Cassidy & Shaver, 2008); anxiety disorders as a result of parental control through overprotection or rejection (Bowlby, 1973; as cited in Cassidy & Shaver, 2008); dissociative symptoms which involved turning away from some aspect of environment, where disrupted affective communication with the mother was one of the important factors (Carlson, 1998; Dutra & Lyons-Ruth, 2005; as cited in Cassidy & Shaver, 2008); antisocial personality disorder, which was related to unresolved and dismissing states of mind (Allen, 1996; Levinson & Fonagy, 2004; as cited in Cassidy & Shaver, 2008), and also to dysfunctional level of anger toward parents, often involving intense hatred (Bowlby, 1973; as cited in Cassidy & Shaver, 2008).

Bowlby (1989, p.71) pointed out that,

‘those who suffered from psychiatric disturbances, whether psycho-neurotic, sociopathic, or psychotic, always show impairment of the capacity for affectional bonding, an impairment that is often both severe and long-lasting’.

He also stated that there are two sorts of symptoms, or disorders that are found to be preceded by a high incidence of disrupted affectional bonds, psychopathic (or sociopathic) personality and depression (Bowlby, 1989, p.71).

One of the available questionnaires on attachment styles is developed by Bartholomew and Horowitz in 1991, The Relationship Questionnaire, which is focused on defining the attachment style in romantic relationships. It is based purely on self-reporting, whereby the respondents have just to report how secure they feel
they are in a relationship. This approach to measuring attachment was questioned by Crawford, Shaver, and Goldsmith (2007), arguing whether self-reported anxious attachment captures a key construct in attachment theory or if it reflects a more general personality trait instead; as correlations between anxious attachment and neuroticism were moderately high (about 0.40 to 0.50). They used a college sample of 287 late adolescents and young adults to show that questionnaire measures of neuroticism and anxious attachment do not have a simple linear association; instead, neuroticism and anxious attachment have a more complex dynamic relationship that is moderated by avoidant attachment which reflects a strategy for affect regulation; also association between neuroticism and anxious attachment is further moderated by conscientiousness, a personality trait that may reflect a more biologically mediated system of affect regulation. This shows that self-reported attachment pattern might not be entirely objective.

On the secure attachment research perspective, the study of Fox (2003) examined differences in attachment style and personality, using 243 undergraduate students. Positive correlations were revealed between personality constructs of positive emotionality and total self-concept. The constructs of negative emotionality and constraint were also positively associated. Inverse relationships were found between negative emotionality, positive emotionality and total self-concept. Secure attachment types were found to have higher total self-concept and positive emotionality and lower negative emotionality and constraint. All of the insecure attachment types were located around negative emotionality, except dismissive-avoidant.
It is important to mention that most of the studies discussed use the Relationship Questionnaire of Bartholomew and Horowitz, thus, dividing attachment into different patterns, rather than scoring the level of attachment quality. But in cases where attachment is not anxious, and not ambivalent, but also not entirely secure, this questionnaire doesn’t measure a level of this security. Therefore, in this work another questionnaire will be used – Inventory of Parent and Peer Attachment (IPPA) of Greenberg & Armsden of 1987 (Greenberg & Armsden, 2009). Another reason for such choice is because it focuses on parental attachment more than on romantic relationships, and parental attachment is the main focus of this work. As most of the studies conducted recently focus on attachment to partners, here is some room for the further research. Even when parental attachment is studied, it is usually based on memories of attachment patterns in childhood, or parental attachment during adolescent years. No specific study was found to research attachment to parents in early adulthood, like between the age 18 and 35. This will be the main focus of this paper.

Not many studies can be found on specifically mindful attention in relation to attachment or to personality, there were some more general studies on the correlation between personality and cognitive attention abilities. These studies were reviewed, as mindfulness also represents attention ability, just in a more specific way. The main conclusion from these studies is that introverts, those high in neuroticism and in psychoticism performed slower in the tasks requiring attention, or were more easily disturbed while trying to focus or to concentrate.
For example, Gruszka (1999) examined the relationship between personality traits and attentive functioning as manifested by the efficiency of cognitive inhibition and susceptibility to interference. Tested on 57 college students, results showed a significant interaction between personality and interference susceptibility. The performance of introverts was more adversely affected by incoherence of stimuli than that of extroverts. Participants high on neuroticism performed slower under the influence of incoherent stimuli than those with stable emotionality. Participants scoring high on psychoticism responded more slowly than those with lower scores, with regard to incoherent stimuli.

The research indicates that adults high in neuroticism are more likely to have fluctuations in mental efficiency when performing elementary cognitive operations. It was proposed that individuals high in neuroticism were characterised by increased noise within information processing from perception to action (Robinson & Tamir, 2005; Robinson, Wilkowski & Meier, 2006; as cited in Flehmig, Steinborn, Langner, 2007). Based on that finding, Flemig (2007; as cited in Flehmig, Steinborn, Langner, 2007) conducted another research to investigate the relationship between neuroticism and cognitive failure liability in everyday-life situations, using self-reported data from 222 individuals. The results revealed positive correlations between neuroticism and general cognitive failure liability, providing further support for the mental noise hypothesis.

Heard (1978, 1981; as cited in Parkes & Stevenson-Hinde, 1982, p.298) found that insecure attachments can impair the learning of new skills. As he puts it:
Because of the difficulty the insecurely attached child experiences in exploration and thus in building an accurate assumptive world, such children may lack a sense of ‘fit’ between themselves and the world about them. Similarly the persistence of insecure attachments into adult life may impair a person’s ability to modify his assumptive world in the face of change.

To conclude the above, insecure adult attachment, has been found to be related to the negative psychological aspects of adult personality; and in turn, such personality aspects as introversion, high neuroticism and psychoticism appeared to be linked to problems with such cognitive ability as attention.

Upon reviewing the literature in relation to the researched areas and their correlations, there were few papers found examining effects of attachment style on personality aspects, such as neuroticism and psychoticism; and few papers examining relationship between personality traits and attention ability in adults. But no study was conducted to examine specifically parental (also, separately, attachment to a mother and a father) attachment and its relation to personality, no study of specifically mindful attention in relation to personality or quality of attachment, as well as no study to examine all three aspects – attachment, personality and mindful attention. And none of them was conducted in Ireland. This is considered a gap in research which might be very useful to examine, as relationship between the three areas of psychology may benefit a broad public – from parents to professionals, such as psychologists, psychotherapists; as well as may trigger further relevant research.
Therefore, the purpose of this study is to examine the thus far unstudied relationship between parental attachment quality, personality (such aspects as extraversion, neuroticism, and psychoticism), and mindful attention awareness among adult population in Ireland. This study will be conducted from a different angle, researching relationships between parental attachment and personality, as well as parental attachment and mindful attention.

The aim of this study is to investigate if higher parental attachment score may be associated with lower level of neuroticism and psychoticism, as well as with better ability to maintain mindful attention among a sample of randomly selected young adults living in Ireland.

Additionally, this study will also examine whether there are significant differences between male and female attachment, in relationship with these variables, as well as if there is stronger relationship between mother or father attachment in relation to neuroticism, psychoticism, and mindful attention. Also, gender differences will be examined in all of the proposed variables.

This research will be conducted with hope that this study will enhance knowledge within the all three areas, which are: child-parent attachment, personality dimensions (extraversion, neuroticism, and psychoticism), and mindful attention awareness (within the field of positive psychology); and will yield useful information on the improvement of psychological treatment, such as family therapy and interpersonal therapy, for people with high neuroticism, psychoticism, and
mindful attention problems. This study might also trigger further research in all three areas.

This is a quantitative partly correlational, partly quasi-experimental survey design study, and descriptive in nature. Specifically, these are the main hypotheses proposed in this study: (H1) there is a relationship between parental attachment (including attachment to a mother and to a father separately) and neuroticism, hypothesising that the higher the parental attachment score the lower the level of neuroticism; (H2) there is a relationship between parental attachment (including attachment to a mother and to a father separately) and psychoticism, hypothesising that the higher the parental attachment score the lower the level of psychoticism; (H3) there is a relationship between parental attachment (including attachment to a mother and to a father separately) and mindful attention, hypothesising that the higher the parental attachment score the higher the score of mindful attention.

Additionally, this study will examine, whether: (4) there is a relationship between parental attachment (including attachment to a mother and to a father separately) and extraversion; (5) males and females have different results in relationships between parental attachment (including attachment to a mother and to a father separately) and neuroticism, psychoticism, extraversion, and mindfulness; (6) there are significant differences between males and females in parental attachment (including attachment to a mother and to a father separately) scores, levels of neuroticism, psychoticism, extraversion, and mindful attention scores.
Method

Participants

In the present research 80 young adults participated, aged 18-35 years. These participants were drawn from the general public, some of them were part-time college students, and some of them were young working adults. This was a voluntary participation as a good will of these participants to contribute to psychological research.

Participants were asked about their age (younger than 18; 18 to 35; or older than 35), and those who were under 18 years old, or over 35 years old, didn’t participate in the research. Participants did not have to disclose their age more specifically, as it was not essential for this research.

As participants were selected randomly, there was not equal number of males and females participating in the research; however, both genders had equal opportunity to participate.

Another condition for participation in the research was place of living, which should have been Ireland, as this research was aimed at Irish population exclusively.

In order to conduct this research, an online survey was created on the following website: www.surveymonkey.com. 50 of all respondents filled the survey online. They were asked to do it through advertising of the survey on various social
networking websites. Also, some of these participants were students, asked to participate by the DBS lecturer. Another 30 of all respondents were DBS students who participated in the survey as a part of Research Project class.

To be able to participate in the survey, participants had to have a mother and a father, or a person who took care of a respondent as a mother or as a father; to be able to discuss relationships with them.

Apart from the conditions mentioned above, anyone had equal opportunities to participate in the research; therefore, the broad public was invited to do so. One benefit of that was the fact that participants had different backgrounds, occupation, education, and so on; which allowed data to be more objective and applicable to a broad public, not only to people with specific characteristics (like their occupation, education, or income level).

**Design**

This design of this research is partly correlational, partly quasi-experimental, which divides it in two parts. Each part is described separately.

In the correlational part of the research the examined variables were: parental attachment score as a predictor variable (PV); levels of neuroticism, neuroticism, extraversion, and mindful attention as criterion variables (CV). Thus, in this part of research the task is to find out how strong is the correlation between parental attachment score and levels of neuroticism, psychoticism, extraversion, and mindful
attention. Within the same design, there were also subscales used in order to define whether there is stronger relationship between the attachment score to a mother or to a father with levels of neuroticism, psychoticism, and mindful attention. Additionally, two groups of males and females were discussed in terms of differences in parental attachment score correlation with their levels of neuroticism, psychoticism, and mindful attention. Tests were run also for males and females separately and were then compared in terms of strength of correlation.

In the quasi-experimental part of the research, there were two groups examined – males and females, with the aim to find out whether these two groups differ significantly in terms of parental attachment score, levels of neuroticism, psychoticism, extraversion, and mindful attention. This represented a quasi-experimental design, as the research was carried out without direct intervention, but it still examined different groups whether there was a significant difference between males and females in relation to the variable mentioned above. In the quasi-experimental part for the research, between-participants design was used, as it examined differences between separate groups of participants.

**Materials**

There were three questionnaires used for this research, as one combined survey. They were used to assess three aspects; attachment to parents; personality aspects such as neuroticism, psychoticism, and extraversion/introversion; as well as mindful attention among young adults. Assessment of these variables then helped to find out if there are associations between them.
To assess attachment to parents variable, *Inventory of Parent and Peer Attachment (IPPA)* (Greenberg & Armsden, 1987) – Mother, Father, and Peer attachment, revised version – was used, and offered question in the survey were only in relation to a mother and a father. This measure assessed trust, communication, and alienation with parents. The questionnaire included 25 statements about relationships with a mother, and 25 about relationships with a father; the statements are same for both. The respondents had to give each statement a rating from 1 (almost never or never true) to 5 (almost always or always true) Examples of these questions are the following: *My mother/father respects my feelings*; or *I wish I had a different mother/father*; or else, *My mother/father has her/his own problems, so I don’t bother her/him with mine*. The full questionnaire is presented in the Appendix 1. In terms of reliability of this questionnaire, three week test-retest reliabilities for a sample of 27 18- to 20-year-olds were Mother attachment, .87; Father attachment, .89; Peer attachment, .92 (Cronbach’s alpha) (Greenberg & Armsden, 2009).

In order to assess aspects of personality; neuroticism, psychoticism, and extraversion/introversion, *the short-form revised Eysenck Personality Questionnaire (EPQ-S): A German Edition* (Francis, Lewis, & Ziebertz, 2006) was used. This questionnaire consisted of 48 questions, where 12 questions were related to each of the section: level of psychoticism, level of neuroticism, extraversion/introversion, and a lie scale. Data from the lie scale was not used in this research, as it was not included in the research topic and proposed hypotheses. The participants were asked to answer *yes/no* to each question, whatever they thought was more relevant to their personality. Here are few examples of the personality questions: *Does your mood often go up and down?* or *Do you enjoy meeting new
people? or else, Do you worry too long after an embarrassing experience? The full personality questionnaire is also presented in the Appendix 1. In terms of reliability of this questionnaire, Francis, Lewis, & Ziebertz (2006) have reported the following alpha (Cronbach, 1951; cited in Francis, Lewis, & Ziebertz, 2006) coefficients: extraversion, 0.8523; neuroticism, 0.8104; psychoticism, 0.4181; lie scale, 0.6379.

The third questionnaire used to assess mindful attention, was *Mindful Attention Awareness Scale (MAAS)* (Brown & Ryan, 2003). This questionnaire was designed to assess a core characteristic of dispositional mindfulness, which is open or receptive awareness of and attention to what is taking place in the present. The questionnaire consisted of 15 items, which the participants had to rate from 1 (almost always) to 6 (almost never). The examples of questions are the following: *I could be experiencing some emotion and not be conscious of it until some time later*; or, *I do jobs or tasks automatically, without being aware of what I am doing*; or else, *I snack without being aware of what I am eating*. According to Brown & Ryan (2003), the scale showed strong psychometric properties and has been validated with college, community, and cancer patient samples. They also stated that correlational, quasi-experimental, and laboratory studies have shown that the MAAS tapped a unique quality of consciousness related to, and predictive of, a variety of self-regulation and well-being constructs (Brown & Ryan, 2003). Also, full copy of this questionnaire is included in Appendix 1.

**Apparatus**

The IBM SPSS Statistics 21.0 software was used for the data analysis.
Procedure

The whole process of gathering data took about two months. As it showed [www.surveymonkey.com](http://www.surveymonkey.com) website, the response times of participants varied from 10 minutes to about an hour to complete the survey.

The process of gathering data was the following. First, the survey was advertised on various social networking websites, to get volunteers who would like to make contribution into a psychological research. About one fourth of all answers were gathered this way. Next step was to ask students from Research Project class to fill it out, so that another 30 questionnaires were filled out. Then a DBS lecturer asked his students to fill an online survey, it helped to get another 15 filled questionnaires. Finally, some extra advertising was organised to get the rest of the questionnaires filled out, in order to get the aimed amount of 80 questionnaires.

The participants were told that the purpose of this research study was to find out whether there is a relationship between parental attachment, aspects of personality, and mindful attention among young adults. The written instructions are presented in Appendix 1 together with the full questionnaire. Then participants filled out the questionnaire in their own time, and returned when they finished.

In relation to ethical considerations, all necessary steps have been taken. First, the questionnaire was anonymous, so none of participants had to disclose their names. The survey online just registered the data, so it was impossible to recognise who filled out the questionnaire. And when questionnaires were filled out using
pencil and paper, they were gathered all together from the group without any possibility to know who filled them. Second, every participant had a right to withdraw from participation, and some of them did, for example, those who had no mother or no father, or who felt this information is too sensitive to dip into. The participants were informed what the survey is about, so they could also refuse taking participation. Also, they had contacts to get in touch with in case of emotional difficulty or distress dealing with a sensitive experiences or memories, included in the questionnaire’s written instructions.
Results

This section presents the results of the conducted research, and examines a number of correlations and differences found across the variables. Its main purpose is to find out to whether the proposed hypotheses are to be accepted or rejected. This section is divided to subsections for the convenience.

Descriptive Statistics

All research participants were of the age between 18 and 35 years old. The number of male and female participants was unequal; there were 25 of males and 55 of females participating in the research, giving the total number of 80 participants. As the Figure 1 suggests, there were 31% of male and 69% of female participants.

![Figure 1 Male and Female Participants](image)

The research examined 7 variables in total; they were parental attachment score (further called, Parental Attachment), with the subscales of attachment to a mother
score (further called, *Mother Attachment*), and attachment to a father score (further called, *Father Attachment*); such personality scores as level of neuroticism (further called, *Neuroticism*), level of psychoticism (further called, *Psychoticism*), level of extraversion (further called, *Extraversion*); and mindful attention score (further called, *Mindfulness*).

The table below presents means and standard deviations of the examined variables, as well as their minimum and maximum values.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Attachment</td>
<td>181.93</td>
<td>37.18</td>
<td>85</td>
<td>250</td>
</tr>
<tr>
<td>Mother Attachment</td>
<td>95.56</td>
<td>18.41</td>
<td>44</td>
<td>125</td>
</tr>
<tr>
<td>Father Attachment</td>
<td>86.36</td>
<td>22.61</td>
<td>35</td>
<td>125</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>5.19</td>
<td>3.05</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Psychoticism</td>
<td>2.76</td>
<td>1.93</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Extraversion</td>
<td>7.69</td>
<td>3.45</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Mindfulness</td>
<td>4.11</td>
<td>0.73</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

The *Parental Attachment* mean (181.93) represents a score above the middle, with a minimum score of 85 and a maximum score of 250; however, standard deviation is quite high (37.18). When compare *Mother Attachment* and *Father Attachment*, as subscales of *Parental Attachment*, the mean of *Mother Attachment* (95.56) is higher than the mean of *Father Attachment* (86.36); however, both of them
are above the middle of the maximum score (125). The standard deviation of Father Attachment (22.61) is higher than that of Mother Attachment (18.41).

If to compare the personality variables, it can be noticed that Extraversion has the highest mean (7.69) and the highest standard deviation (3.45) of all three variables; whereas, Psychoticism has the lowest mean (2.76) and the lowest standard deviation (1.93); Neuroticism shows the approximately average score of mean (5.19) and still quite high standard deviation (3.05). The mean of Mindfulness is slightly above the middle (4.11) with a small standard deviation (0.73).

**Inferential Statistics**

This section is divided into subsections for better comprehension. In the first subsection, there are discussed the main hypotheses, by examining relationships between Parental Attachment and Neuroticism, Psychoticism, and Mindfulness. Also, Mother Attachment and Father Attachment relationships with the variables mentioned above are discussed separately.

The next two subsections represent additional analysis to ensure a deeper insight into the interaction between the variables. In the second subsection, males and females data are compared in terms of how Parental Attachment correlates with Neuroticism, Psychoticism, Extraversion, and Mindfulness. Finally, the third subsection examines if there are differences between males and females in levels of Parental (including Mother and Father) Attachment, Neuroticism, Psychoticism, Extraversion, and Mindfulness.
Main Hypotheses: General Relationships between Parental Attachment, Personality, and Mindfulness

Some of the data are normally distributed, some of that are not. Such variables as Parental Attachment, Mother Attachment, Father Attachment, Neuroticism, and Mindfulness are normally distributed, so parametric test should be used to reveal correlations among them, which was a Pearson’s test. Whereas, data for Psychoticism and Extraversion are not normally distributed, so non-parametric test was used for correlations, which in this case is a Spearman’s rho test.

The results are summarised in the Table 2 and Table 3 and then described in more detail.

Table 2 Pearson’s correlation table displaying the relationships between variables with normally distributed data

<table>
<thead>
<tr>
<th></th>
<th>Neuroticism</th>
<th>Mindfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Attachment</td>
<td>-.194</td>
<td>.254*</td>
</tr>
<tr>
<td>Mother Attachment</td>
<td>-.104</td>
<td>.287**</td>
</tr>
<tr>
<td>Father Attachment</td>
<td>-.234*</td>
<td>.184</td>
</tr>
</tbody>
</table>

* p significant at .05 level.  
** p significant at .01 level
Table 3 Spearman’s rho correlation table displaying the relationships between variables with non-normally distributed data

<table>
<thead>
<tr>
<th></th>
<th>Psychoticism</th>
<th>Extraversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Attachment</td>
<td>-.128</td>
<td>.103</td>
</tr>
<tr>
<td>Mother Attachment</td>
<td>-.176</td>
<td>.050</td>
</tr>
<tr>
<td>Father Attachment</td>
<td>-.104</td>
<td>.130</td>
</tr>
</tbody>
</table>

When relationship between Parental Attachment and other variables was examined, it was found out that the only variable Parental Attachment has a significant correlation with was Mindfulness. A Pearson’s correlation coefficient found that there was weak positive significant relationship between Parental Attachment and Mindfulness \( r = 0.254, p<0.05, \text{2-tailed} \). Other variables showed no significant relationship with Parental Attachment, such as Parental Attachment and Neuroticism \( r=-0.194, p>0.05, \text{2-tailed} \), and Parental Attachment and Psychoticism \( r=-0.128, p>0.05, \text{2-tailed} \), Parental Attachment and Extraversion \( r=0.103, p>0.05, \text{2-tailed} \).

However, when looking at subscales; Mother Attachment and Father Attachment separately, there appeared to be more specific relationships between the variables. Thus, while Mother Attachment showed no significant relationship with Neuroticism \( r=-0.104, p>0.05, \text{2-tailed} \), Father Attachment does; a Pearson’s correlation coefficient found that there was a weak negative significant relationship between Father Attachment and Neuroticism \( r=-0.234, p<0.05, \text{2-tailed} \).
Another interesting finding in relation to *Mindfulness*; it showed no significant correlation with *Father Attachment* (r=0.184, p>0.05, 2-tailed), but it showed significant correlation with *Parental Attachment*, as mentioned above, and even stronger correlation with *Mother Attachment*. As a Pearson’s correlation coefficient showed, there was a *moderately strong positive* significant relationship between *Mother Attachment* and *Mindfulness* (r=0.287, p<0.01, 2-tailed).

None of the variables, nor *Parental Attachment*, neither *Mother* or *Father Attachment*, showed significant correlations with *Psychoticism* or *Extraversion*, when examining all participants together, without dividing them into male and female participants.

*Additional Analysis: Gender Differences in Relationships between Parental Attachment, Personality, and Mindfulness*

This subsection examines what are the relationships between the proposed variables for males and females separately. The results are then compared. This helps to find out whether there are gender influences in terms of correlations.

First, correlation coefficients among the variables for male participants are described. Then situation for female participants is examined.
Table 4 Pearson’s correlation table displaying the relationships between variables with normally distributed data – for MALE participants only

<table>
<thead>
<tr>
<th>Variable</th>
<th>Neuroticism</th>
<th>Mindfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Attachment</td>
<td>-.082</td>
<td>.234</td>
</tr>
<tr>
<td>Mother Attachment</td>
<td>.066</td>
<td>.150</td>
</tr>
<tr>
<td>Father Attachment</td>
<td>-.188</td>
<td>.265</td>
</tr>
</tbody>
</table>

Table 5 Spearman’s rho correlation table displaying the relationships between variables with non-normally distributed data – for MALE participants only

<table>
<thead>
<tr>
<th>Variable</th>
<th>Psychoticism</th>
<th>Extraversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Attachment</td>
<td>-.060</td>
<td>-.174</td>
</tr>
<tr>
<td>Mother Attachment</td>
<td>-.212</td>
<td>-.345</td>
</tr>
<tr>
<td>Father Attachment</td>
<td>.009</td>
<td>-.059</td>
</tr>
</tbody>
</table>

It is essential to note that when examining male participants separately, it was found out that there were no significant correlations among any of the variables. Although some correlation coefficients were higher than the other, they were still not significant at p<0.05 level.

As the Table 4 and Table 5 showed, male participants displayed no significant relationship between Parental Attachment and Neuroticism (r= -0.082, p>0.05, 2-tailed), Parental Attachment and Psychoticism (r= -0.060, p>0.05, 2-tailed), Parental Attachment and Extraversion (r= -0.174, p>0.05, 2-tailed), Parental Attachment and Mindfulness (r= 0.234, p>0.05, 2-tailed).
Even the breakdown into subscales of *Mother* and *Father Attachment* has not revealed any significant correlations for male participants.

In some pairs of variables with *Mother* and *Father Attachment* there appeared the opposite direction of the relationship, such as *Mother Attachment* and *Neuroticism* had positive relationship; however, not significant (r= 0.066, p>0.05, 2-tailed); but *Father Attachment* and *Neuroticism* shown negative relationship, but also, not statistically significant (r= -0.188, p>0.05, 2-tailed). Another example of different directions or relationship were the variables *Mother Attachment* and *Psychoticism* (r= -0.212, p>0.05, 2-tailed) and *Father Attachment* and *Psychoticism* (r= 0.009, p>0.05, 2-tailed).

Other correlation coefficients showed same direction relationship for *Mother Attachment* and *Father Attachment*; such as *Mother Attachment* and *Extraversion* (r= -0.345, p>0.05, 2-tailed) and *Father Attachment* and *Extraversion* (r= -0.059, p>0.05, 2-tailed); also *Mother Attachment* and *Mindfulness* (r= 0.150, p>0.05, 2-tailed) and *Father Attachment* and *Mindfulness* (r= 0.265, p>0.05, 2-tailed); but again, none of them were found statistically significant; although, some of them were close to that.

Next two Tables 6 and 7 summarise the results for female participants. And these results were very different from those of male participants.
Table 6 Pearson’s correlation table displaying the relationships between variables with normally distributed data – for FEMALE participants only

<table>
<thead>
<tr>
<th></th>
<th>Neuroticism</th>
<th>Mindfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Attachment</td>
<td>-.339*</td>
<td>.333*</td>
</tr>
<tr>
<td>Mother Attachment</td>
<td>-.253</td>
<td>.389**</td>
</tr>
<tr>
<td>Father Attachment</td>
<td>-.347**</td>
<td>.225</td>
</tr>
</tbody>
</table>

* p significant at .05 level.  
** p significant at .01 level.

Table 7 Spearman’s rho correlation table displaying the relationships between variables with non-normally distributed data – for FEMALE participants only

<table>
<thead>
<tr>
<th></th>
<th>Psychoticism</th>
<th>Extraversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Attachment</td>
<td>-.136</td>
<td>.265*</td>
</tr>
<tr>
<td>Mother Attachment</td>
<td>-.132</td>
<td>.244</td>
</tr>
<tr>
<td>Father Attachment</td>
<td>-.125</td>
<td>.235</td>
</tr>
</tbody>
</table>

* p significant at .05 level.

As Table 6 and Table 7 showed, there were found few significant correlations between the variables. As Pearson’s test showed, Parental Attachment found to be moderately negatively related to Neuroticism \(r=-0.339, p<0.05, 2\text{-tailed}\), and positively moderately related to Mindfulness \(r=0.333, p<0.05, 2\text{-tailed}\) and as Spearman’s rho test showed, positively related to Extraversion \(r=0.265, p<0.05, 2\text{-tailed}\).
Specifically, Pearson’s correlation coefficient found there were moderately strong positive relationship between Mother Attachment and Mindfulness (r=0.389, p<0.01, 2-tailed); and moderately strong negative relationship between Father Attachment and Neuroticism (r=-0.347, p<0.01, 2-tailed).

Pearson’s and Spearman’s rho tests revealed no statistically significant relationship between any attachment score and Psychoticism, indicating that these variables are not related in any case, whether for all participants in total, or in male of female participants separately.

Additional Analysis: Gender Differences in Parental Attachment, Personality, and Mindful Attention

This subsection examines whether there are statistically significant differences in males or females among such variables as Parental Attachment (also, specifically, Mother and Father Attachment), Neuroticism, Psychoticism, Extraversion, and Mindfulness. The aim of this additional analysis was to understand whether males or females are initially predisposed to any of these variables more or less.

The differences between variables with normally distributed data were tested with an Independent Samples T-test; whereas those with not normally distributed data were tested with Mann-Whitney U test; therefore, data was summarised in two Tables 8 and 9.
Table 8 An Independent Samples T-test table displaying the differences between Male and Female groups for the various parametric variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>Df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Attachment</td>
<td>Male</td>
<td>172.44</td>
<td>39.43</td>
<td>-1.552</td>
<td>78</td>
<td>.125</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>186.24</td>
<td>35.65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother Attachment</td>
<td>Male</td>
<td>91.84</td>
<td>19.08</td>
<td>-1.223</td>
<td>78</td>
<td>.225</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>97.25</td>
<td>18.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father Attachment</td>
<td>Male</td>
<td>80.60</td>
<td>23.97</td>
<td>-1.551</td>
<td>78</td>
<td>.125</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>88.98</td>
<td>21.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>Male</td>
<td>4.04</td>
<td>3.13</td>
<td>-2.333</td>
<td>78</td>
<td>.022</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>5.71</td>
<td>2.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mindfulness</td>
<td>Male</td>
<td>4.33</td>
<td>0.52</td>
<td>2.200</td>
<td>68</td>
<td>.031</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.00</td>
<td>0.79</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As Table 8 shows, the results of an independent samples t-test have revealed that two of the five tested variables displayed significant differences between male and female participants.

An Independent samples t-test found that there was a statistically significant difference between Neuroticism levels of males and females (t(78)=-2.333, p<0.05, 2-tailed). Females (mean = 5.71, SD = 2.89) were found to have higher levels of Neuroticism than males (mean = 4.04, SD = 3.13).

An Independent samples t-test also found that there was a statistically significant difference between Mindfulness score of males and females (t(68) = 2.200, p<0.05,
2-tailed). Males (mean = 4.33, SD = 0.52) were found to have higher Mindfulness scores than females (mean = 4.00, SD = 0.79).

None of the attachment variables showed a statistically significant difference between males and females; such as Parental Attachment ($t(78)$=-1.552, $p>0.05$, 2-tailed), Mother Attachment ($t(78)$=-1.223, $p>0.05$, 2-tailed), and Father Attachment ($t(78)$=-1.551, $p>0.05$, 2-tailed). Means of these variables for males and females are considered roughly the same.

**Table 9 Mann-Whitney U test table displaying the differences between Male and Female groups for the various non-parametric variables.**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean rank</th>
<th>Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychoticism</td>
<td>Male</td>
<td>43.04</td>
<td>-.668</td>
<td>.504</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>39.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion</td>
<td>Male</td>
<td>41.40</td>
<td>-.236</td>
<td>.814</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>40.49</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9 displayed two variables with differences between male and female scores; but none of them was statistically significant.

A Mann-Whitney U test was used to test the hypothesis that there will be a significant difference between the levels of Psychoticism and Extraversion of male and female participants. In relation to the Psychoticism levels, the male participants had a mean rank of 43.04, compared to the mean rank of 39.35 of female
participants. The Mann-Whitney revealed that males and females did not differ significantly in levels of *Psychoticism* ($Z = -0.668$, $p>0.05$, 2-tailed).

In relation to *Extraversion* levels, the male participants had a mean rank of 41.40, compared to the mean rank of 40.49 of female participants. The Mann-Whitney revealed that males and females did not differ significantly in levels of *Psychoticism* ($Z = -0.236$, $p>0.05$, 2-tailed).
Discussion

Aim of Research

The aim of this research was to examine whether higher Parental Attachment score, including Mother Attachment and Father Attachment, could be related to lower levels of Neuroticism and Psychoticism, and to higher scores of ability to maintain Mindful attention among a sample of randomly selected young adults living in Ireland.

Additional aims were to find out whether there is a relationship between Parental Attachment and Extraversion; what are the differences in males and females in terms of how Parental Attachment is related to Neuroticism, Psychoticism, Extraversion, and Mindfulness; and if there are any differences between male and female participants in Parental Attachment scores, levels of Neuroticism, Psychoticism, Extraversion, and Mindful attention scores.

Research Findings and Previous Research

To summarise the findings of this research, there were some of statistical significance. As the data was analysed from different angles, there was obtained specific information about particular correlations and differences between the variables. Firstly, the main hypotheses are discussed, and then additional analysis is brought into focus.
Hypothesis 1

Hypothesis 1 stated that Parental Attachment is negatively related to Neuroticism, which means that the higher the Parental Attachment score the lower the level of Neuroticism. This hypothesis was not supported when the total Parental Attachment score was examined. However, using the subscales of Mother Attachment and Father Attachment scores, it was found out that Father Attachment had a significant negative correlation with Neuroticism; whereas Mother Attachment had not. Thus, the higher Father Attachment score was, the lower was Neuroticism, and vice versa.

Although initially focused on mother-child attachment (Bowlby, 1969, 1982; Ainsworth, 1978), most of the researchers in the area of Parental Attachment regard both parents as equally important in their children’s attachment pattern formation and future personality development (George, Kaplan, and Main, 1985; as cited in de Haas, Bakermans-Kranenburg, & van Ijzendoorn, 1994; Armsden and Greenberg, 1987, 2009; as cited in Fraley, 2010; Fraley, 2010; Kobak & Sceery, 1988; as cited in Shaffer, 1994) and many more. It is rare that researchers refer solely and specifically to maternal attachment. Most of the literature has found that the most important attachment figures are parents or primary carers. Therefore, Hypothesis 1 can be partially accepted, suggesting that better Father Attachment is significantly related to lower Neuroticism.

Multiple research suggest that Mother Attachment and Neuroticism are related at an earlier stage of child development, like childhood or adolescence (Bowlby, 1988; as cited in Crain, 2005; Weinfield, Sroufe, Egeland, & Carlson, 1999; as
cited in Kochanska, 2001; Brennan and Shaver, 1998; Cassidy & Shaver, 2008). However, it seems not to be related when a child becomes a young adult as this research suggests. Thus, it is useful to examine which of these two variables do change over the time. According to Eysenck (1976, as cited in Cervone & Pervin, 2007; Ryckman, 2008), personality traits and characteristics, such as hostility, impulsivity, loneliness, distress, anxiety, depression, negative affect, dysfunctional level of anger, constraint, negative emotionality and others, which basically represent some of neurotic and psychotic characteristics, are inclined to be persistent in humans. Eysenck postulated that they are biologically based; however, this view has not received enough scientific support (Gray, 1990; as cited in Cervone & Pervin, 2007). This, therefore, creates an assumption that Mother Attachment is the variable that could change over time and there is a considerable amount of research suggesting that. (Fagot & Kavanagh, 1990; as cited in Shaffer, 1994; Shaffer, 1994)

The previous research confirms that there is a need for attachment during the whole lifetime (Bowlby, 1988; as cited in Shaffer, 1994; Bowlby, as cited in Fraley, 2010), as well as the early attachment patterns which stem into adolescence and adulthood (Kobak & Sceery, 1988; as cited in Shaffer, 1994; Waters et al., 1979, Erickson et al., 1985; cited in Carlson, Martin, & Buskist, 2004). This gave an initial idea that the attachment established in early childhood might stay similar when the child grows up. However, some researchers suggest that attachment patterns can change over time (Fagot & Kavanagh, 1990; as cited in Shaffer, 1994; Shaffer, 1994). It means that perhaps in the case with Mother Attachment and Neuroticism, the reason why there was no significant relationship found could be that personality patterns could have been established during the childhood (for example, high
neuroticism following the insecure attachment), but the relationships between a child and a mother could have changed for a better over time. This could be a possible explanation of seemingly secure Mother Attachment and high levels of Neuroticism.

Another factor in the personality formation could be attachment to romantic partners and this could play a role in levels of Neuroticism and also Psychoticism (discussed further in H2) (Scott, Levy, and Pincus, 2009; Surcinelli, Rossi, Montebarocci, Baldaro, 2010). However, according to some sources, the relationships with romantic partners should have been influenced by the attachment patterns to parents (Steele, Waters, Crowell, & Treboux, 1998; as cited in Fraley, 2010; Fraley, 2002, as cited in Fraley, 2010).

As the result of Mother Attachment and Neuroticism relationship is rather unexpected, this is an area to be looked at in further research. More specifically it is addressed later in this section with suggestions for further research.

Hypothesis 2

Hypothesis 2 proposed that Parental Attachment is negatively related to Psychoticism, which indicates that the higher the Parental Attachment score the lower the level of Psychoticism. This hypothesis did not find any support when the data obtained was analysed. When this relationship was examined with Mother Attachment and Father Attachment separately, there was also no significant correlation found. Therefore, the hypothesis was rejected.
The rationale to propose such hypothesis, as the possible relationship between Parental Attachment and Psychoticism, or psychopathology in general, was mentioned by some researchers (Bowlby, 1989; Dozier, Stovall-McClough, & Albus, 2008); however, they spoke more about the attachment in childhood, not in adulthood.

A larger study which involved more than 1400 people, most of whom were adults, the results showed that out of 13 personality disorders only psychopathy appeared unrelated to attachment quality, which is a massive argument for Parental Attachment and Psychoticism having no significant relationship.

Thus, as there was no significant correlation found between Parental Attachment and Psychoticism, the null hypothesis cannot be rejected.

**Hypothesis 3**

Hypothesis 3 stated that Parental Attachment is positively related to Mindfulness, which means that the higher the Parental Attachment score the higher the level of Mindfulness. This hypothesis was supported by the results obtained, as they showed that Parental Attachment has a significant positive relationship with Mindfulness, which implicates that the higher the Parental Attachment score, the higher the Mindfulness score.

This is consistent with the previous research, although not numerous, indicating that secure attachment is positively related to cognitive and attention abilities (Heard, 1978, 1981; as cited in Parkes & Stevenson-Hinde, 1982); however, most of the
research focused on the relationship between Neuroticism and Mindfulness, suggesting that the higher the level of Neuroticism, the poorer the Mindful attention (Gruszka, 1999; Robinson & Tamir, 2005, and Robinson, Wilkowski & Meier, 2006; as cited in Flehmig, Steinborn, Langner, 2007).

Although there was no specific study found on the relationship between Parental Attachment and Mindfulness, there seems to be one major component in common. As Hughes (2009) suggests, secure attachment with children can be established only by applying non-evaluative, non-judgemental, and reflective approach, thus accepting child’s experiences and emotions. The research on mindfulness (Langer 2005) states that making evaluations about things, events or people being ‘good’ or ‘bad’ represents mindlessness which is opposed to mindfulness; and mindlessness is perhaps the greatest cause of human unhappiness, according to Langer. Thus, mindfulness is considered to promote non-evaluative, non-judgemental, situated in the present approach; the mindful individual comes to recognise that each outcome is potentially simultaneously positive and negative. This is the same condition for the formation of secure attachment between parents and children; therefore, Parental Attachment and Mindfulness have a common base and are positively related.

When Mindfulness was examined in relationship with Mother Attachment and Father Attachment separately, it was found that it was not related to Father Attachment, but was more related to Mother Attachment than to total Parental Attachment. This suggests that a mother is a more important figure in the formation of Mindfulness. As the reviewed literature suggests, ‘mother figure’ plays a bigger
role in a child’s early life due to a bigger amount of time spent together (Leach, 2009), which may lead to the formation of mindful attention in accordance with the relationships with a mother.

As there is no considerable amount of research on the relationship between Mother Attachment and Mindfulness, there is not much information on how the formation of attachment to a mother may influence the formation of mindful attention. Therefore, this is a new niche for further research to explore on that.

Additional Analysis

Parental Attachment and Extraversion

There was no significant correlation found between Parental Attachment and Extraversion; also when the tests were run separately for Mother Attachment and Father Attachment. There was also no previous research found confirming that there would be a significant correlation.

Gender differences in correlations

Next, all correlations were tested for males and females separately to find out whether both genders would show different results. What was remarkable, when the data of the male participants were examined separately, there was no significant correlation found between any of the variables. Some were close to significance, but none of them reached that level. However, the situation was different with female participants, as there were found even more correlations and they were more significant (increased from weak to moderate relationship) than in the first aim of research, when all participants’ data were examined together.
Among female participants, it was found out that Parental Attachment is negatively moderately related to Neuroticism; as well as Father Attachment which was found to be related to Neuroticism. Also, Parental Attachment was positively moderately linked to Mindfulness, and to Extraversion (which is new to this research, as no correlations to Extraversion were found in the previous parts of research). Finally, Mother Attachment was found to have a positive moderate correlation with Mindfulness.

One factor that could have influenced the above results could be gender imbalance, as there were only 25 males participating in comparison with 55 females, which may have compromised the objectivity of the results. Therefore, further research is advised with a larger sample of population with a greater gender balance.

Another reason for such differences between males and females in the found correlations can lie in the differences of the perception of family relationships and of patterns of relatedness in general. Some studies showed that Parental Attachment is stronger in girls than in boys (Sorenson & Brownfield, 1991; as cited in Ma & Huebner, 2008); also, later in life, girls are more influenced by peer relations (Hay & Ashman, 2003; cited in Ma & Huebner, 2008); and most importantly, there is evidence to suggest that boys are stressing independence in their relationships and girls are stressing relatedness (Cross & Madson, 1997; cited in Ma & Huebner, 2008). This may explain why Parental Attachment has significantly more correlations with Neuroticism, Extraversion and Mindfulness in females than in males.
Some interesting research in relation to females states that at some stage they relate to peers more than to parents, and the quality of their attachment relationships with parents generalises to the quality of their relationships with peers (Ma & Huebner, 2008). Again, this provides a good base for further research from another angle; that of attachment to peers.

**Gender differences in the variables**

The final aim of this research was to find out whether gender differences exist in the discussed variables, which are *Parental Attachment* (*Mother and Father Attachment* including), *Neuroticism, Psychoticism, Extraversion*, and *Mindfulness*. The results revealed two significant differences out of seven examined, which were in *Neuroticism* and *Mindfulness*.

Females appeared to score significantly higher in *Neuroticism* than males which is consistent with the previous research, examining women and men at different ages, and confirming this to be true across the lifespan, using the Five Factor Model rather than Eysenck’s PEN (Chapman, Duberstein, Sorensen, and Lyness, 2007).

Males appeared to score significantly higher on *Mindfulness* than females. As mindfulness is quite new, practical and not broadly researched in the area of psychology, there have not been many studies conducted to verify this difference. However, it can be explained by the example from research within abnormal psychology field, specifically, research in relation to depression. There is a data suggesting that depression prevalence among females is twice higher than among men (Mule, not dated; Silverstein, 1999); obviously, there are many factors
influencing that but one of the significant factors is that women are more likely to ruminate and talk over about their disadvantageous situation in life, thus bringing the past events to the present situation, continuously. Whereas, men have a tendency to focus exclusively on the present moment, by finding a solution for their depressive mood, such as going in for sports, and so on (Piccinelli & Wilkinson, 2000). This gives an example of a male way of coping with difficult life situations; therefore, suggesting their higher tendency to Mindfulness. However, in Psychometric Validation of the Mindful Attention Awareness Scale (MAAS) (MacKillop & Anderson, 2007), it was noted that there was no significant gender difference found in MAAS performance; but it was also mentioned that the factor structure was not confirmed in the subsample of men, apparently due to power limitations. Again, due to an insufficiently researched area, this question is something to be looked at in the future, perhaps with the larger population sample of male participants, than it was in this research.

For all other variables, such as Parental Attachment, Mother Attachment, Father Attachment, Psychoticism, and Extraversion there were no significant differences found between male and female participants.

**Limitations and Strengths of the Research**

One of the major limitations of this research is that the tested age group is not under an exclusive influence of Parental Attachment, as most of young adults start living separately from their parents and there can be many other factors and important others that may have influence on their personality, such as their partners,
The most expected correlation to be found was between *Mother Attachment* and *Neuroticism* variables; however, no significant correlation was found between them. It could be the case that there was a correlation when these participants were children or adolescents, but as they grew their relationships with mothers could improve. Thus, they could still have a high level of *Neuroticism*, but their relationships with mothers could have improved significantly as they matured. The implication of this would be no correlation between these two variables.

Another limitation was gender imbalance of participants, as 55 females participated and only 25 males. Although there is research evidence that males and females perceive family relationships differently and are influenced by them in different ways, it can still be due to this imbalance that results were significantly different for males and females. As for males, separately, there was no correlation found between any of the variables. If there were more males participating the results could be more significant as some correlations were close to significant; however, they never reached that level.

Another limitation to be addressed is that all measures were self-reporting. The use of multiple methods of assessment would enhance the meaningfulness of the findings. Also, in this study, it was not possible to control for other variables that could influence the dependent variables, for example, attachment to romantic partners could play a role, or some life events, or the motivation to provide honest answers was possibly insufficient.
One of the strengths of this research is that for the first time in Ireland there was an attempt to find correlations between the Parental Attachment of young adults and Personality aspects, as well as Mindful attention; even though not all of the hypotheses were accepted. It was helpful to know these results for the future research.

Another strength is that in this research multiple correlations and differences were examined within one paper, apart from the main hypotheses. It was interesting to find out how males and females differ in different aspects, like attachment quality, personality characteristics, and mindful attention abilities.

Also, there was a considerable amount of research examined within this study, providing a broad knowledge within the three areas of research, which was followed by a detailed analysis.

Finally, as this research could not address all questions related to the researched areas, it could be a good base for the future research. It expanded the knowledge within all three areas, which are parental attachment, personality, and mindful attention. It also gives an idea of what aspects are related and hopefully, raise an interest to explore these topics and relationships further.

Applications and future research

This research paper could be useful for parents and mental health care professionals alike. It is useful for parents to realise the importance of relationships
with their children, as it may influence their future lives. It is useful for fathers to know that a low degree of mutual trust, bad quality of communication and, to a great extent anger and alienation may be cause for higher levels of *Neuroticism* in their children, especially in daughters. For mothers it is important to realise that the same aspects of relationships mentioned above may reduce the level of *Mindful attention* in their children, again, especially daughters. Poor attachment quality may be detrimental for their children’s health in a long-term period. However, future research is needed to verify if boys are less influenced by these relationships than girls, hence the researcher stressing the importance of a larger, more appropriately gender balanced sample.

This research may also have some application by family therapists, psychotherapists, and psychologists working with families and children, in the treatment of certain mental health issues, behavioural and/or emotional problems within the family unit and their ability to work through and cope with them. Mindfulness-based treatment can also be considered as an effective way to deal with attachment-related issues.

In relation to the future research, there could be a few lines of development in order to understand the examined aspects better and deeper and verify some results of this research.

First, for comparison of data, it would be useful to conduct this research with the sample of adolescents. This has not been done in Ireland from this angle of research. Then the obtained results could be compared with the results of this research and it
would show whether personalities of adolescents are influenced by parental attachment more than those of young adults. If this was the case, it would be obvious that in adulthood relationships between the examined variables reduce.

Second, another type of attachment, for example, attachment to romantic partners could be examined in terms of relationship with the aspects of personality and mindful attention, as at this age romantic partners might have a greater influence than parents. However, as previous research has shown, attachment to romantic partners is greatly influenced by the attachment to parents, as relationships with parents do form certain patterns for all future attachments (Steele, Waters, Crowell, & Treboux, 1998; as cited in Fraley, 2010; Fraley, 2002, as cited in Fraley, 2010).

Although the areas of Parental Attachment and Mindfulness are well researched separately, there is still insufficient research regarding the relationship between Parental Attachment and Mindfulness; as well as, influence of level of security of Parental Attachment on Mindfulness; thus, it would be very useful to study it further. The most convincing would be a longitudinal study with a considerable gender split sample of participants across different age groups.

**Conclusion**

This research paper examined various correlations and differences, and found that there are significant correlations between Father Attachment and Neuroticism, and between Mother Attachment and Mindfulness. Also, it revealed that females are more influenced by Parental Attachment in terms of Neuroticism, Extraversion, and
Mindful attention, than males. Finally, it was found out that females are significantly higher than males on levels of Neuroticism, whereas males are significantly higher than females on level of Mindful attention. However, there are a few opportunities for further research to verify some of the results, and examine different samples.
References


Appendix 1

My name is Julija Bahvalova and I am conducting research in the Department of Psychology that explores the relationship between parental attachment, personality and mindful attention in young adults. This research is being conducted as part of my studies and will be submitted for examination.

If you are in an age group of 18-35 years, you are invited to take part in this study and participation involves completing and returning the attached anonymous survey. While the survey asks some questions that might cause some minor negative feelings, it has been used widely in research. If any of the questions do raise difficult feelings for you, contact information for support services are included on the final page.

Participation is completely voluntary and so you are not obliged to take part. It will take you about 15 minutes to complete the survey.

Participation is anonymous and confidential. Thus responses cannot be attributed to any one participant. For this reason, it will not be possible to withdraw from participation after the questionnaire has been collected.

The questionnaires will be securely stored and data from the questionnaires will be recorded electronically on a password protected computer.

It is important that you understand that by completing and submitting the questionnaire that you are consenting to participate in the study.

Should you require any further information about the research, please contact JulijaBahvalova, My supervisor can be contacted at

Thank you for taking the time to complete this survey.

The survey consists of three-part questionnaire, first in relation to attachment to your parents, mother or father, or adults who acted as your parents; second part will assess some aspects of personality; and the third part will contain question in relation to mindful attention in everyday experiences. Few general questions are included at the beginning.
Part 1

Please rate each of these statements in relation to your relationships with your mother or the woman who has acted as your mother (e.g., a natural mother and a step-mother). Answer the questions for the one you feel has most influenced you.

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>My mother respects my feelings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>I feel my mother does a good job as my mother.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>I wish I had a different mother.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>My mother accepts me as I am.</td>
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<tr>
<td>I like to get my mother’s point of view on things I’m concerned about.</td>
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<tr>
<td>I feel it’s no use letting my feelings show around my mother.</td>
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<td>My mother can tell when I’m upset about something.</td>
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<tr>
<td>Talking over my problems with my mother makes me feel ashamed or foolish.</td>
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<tr>
<td>My mother expects too much from me.</td>
<td>1</td>
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<tr>
<td>I get upset easily around my mother.</td>
<td>1</td>
<td>2</td>
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<tr>
<td>I get upset a lot more than my mother knows about.</td>
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<tr>
<td>When we discuss things, my mother cares about my point of view.</td>
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<tr>
<td>My mother trusts my judgment.</td>
<td>1</td>
<td>2</td>
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<tr>
<td>My mother has her own problems, so I don’t bother her with mine.</td>
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<tr>
<td>My mother helps me understand myself better.</td>
<td>1</td>
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<td>5</td>
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<tr>
<td>I tell my mother about my problems and troubles.</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>I feel angry with my mother.</td>
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<tr>
<td>I don’t get much attention from my mother.</td>
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<tr>
<td>My mother helps me talk about my difficulties.</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My mother understands me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tr>
<tr>
<td>When I am angry about something, my mother tries to be understood.</td>
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<td>5</td>
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<tr>
<td>I trust my mother.</td>
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<td>5</td>
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<tr>
<td>My mother doesn’t understand what I’m going through these days.</td>
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<td>2</td>
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<td>5</td>
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<tr>
<td>I can count on my mother when I need to get something off my chest.</td>
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<td>2</td>
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<td>5</td>
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<tr>
<td>If my mother knows something is bothering me, she asks me about it.</td>
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<td>2</td>
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</tbody>
</table>
The next set of questions asks you about your relationship with your male Parent (i.e. father or whomever takes care of you).

<table>
<thead>
<tr>
<th>Almost Never Or Never True</th>
<th>Not Very Often True</th>
<th>Sometimes True</th>
<th>Often True</th>
<th>Almost Always or Always True</th>
</tr>
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<tbody>
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</table>

1. My father respects my feelings. 1 2 3 4 5
2. I feel my father does a good job as my father. 1 2 3 4 5
3. I wish I had a different father. 1 2 3 4 5
4. My father accepts me as I am. 1 2 3 4 5
5. I like to get my father’s point of view on things I’m concerned about. 1 2 3 4 5
6. I feel it’s no use letting my feelings show around my father. 1 2 3 4 5
7. My father can tell when I’m upset about something. 1 2 3 4 5
8. Talking over my problems with my father makes me feel ashamed or foolish. 1 2 3 4 5
9. My father expects too much from me. 1 2 3 4 5
10. I get upset easily around my father. 1 2 3 4 5
11. I get upset a lot more than my father knows about. 1 2 3 4 5
12. When we discuss things, my father cares about my point of view. 1 2 3 4 5
13. My father trusts my judgment. 1 2 3 4 5
14. My father has his own problems, so I don’t bother him with mine. 1 2 3 4 5
15. My father helps me understand myself better. 1 2 3 4 5
16. I tell my father about my problems and troubles. 1 2 3 4 5
17. I feel angry with my father. 1 2 3 4 5
18. I don’t get much attention from my father. 1 2 3 4 5
19. My father helps me talk about my difficulties. 1 2 3 4 5
20. My father understands me. 1 2 3 4 5
21. When I am angry about something, my father tries to be understanding. 1 2 3 4 5
22. I trust my father. 1 2 3 4 5
23. My father doesn’t understand what I’m going through these days. 1 2 3 4 5
24. I can count on my father when I need to get something off my chest. 1 2 3 4 5
25. If my father knows something is bothering me, he asks me about it. 1 2 3 4 5
Part 2

Please answer the questions below in relation to your personality, choosing an answer that describes you best.

1. Does your mood often go up and down?  YES  NO
2. Do you take much notice of what people think?  YES  NO
3. Are you a talkative person?  YES  NO
4. If you say you will do something, do you always keep your promise no matter how inconvenient it may be?  YES  NO
5. Do you ever feel ‘just miserable’ for no reason?  YES  NO
6. Would being in debt worry you?  YES  NO
7. Are you rather lively?  YES  NO
8. Were you ever greedy by helping yourself to more than your fair share of anything?  YES  NO
9. Are you an irritable person?  YES  NO
10. Would you take drugs which may have strange or dangerous effects?  YES  NO
11. Do you enjoy meeting new people?  YES  NO
12. Have you ever blamed someone for doing something you knew was really your fault?  YES  NO
13. Are your feelings easily hurt?  YES  NO
14. Do you prefer to go your own way rather than act by the rules?  YES  NO
15. Can you usually let yourself go & enjoy yourself at a lively party?  YES  NO
16. Are all of your habits good & desirable ones?  YES  NO
17. Do you often feel ‘fed up’?  YES  NO
18. Do good manners & cleanliness matter much to you?  YES  NO
19. Do you usually take the initiative in making new friends?  YES  NO
20. Have you ever taken anything (even a pin or button) that belonged to someone else?  YES  NO
21. Would you call yourself a nervous person?  YES  NO
22. Do you think marriage is old-fashioned and should be done away with?  YES  NO
23. Can you easily get some life into a rather dull party?  YES  NO
24. Have you ever broken or lost something that belonging to someone else?  YES  NO
25. Are you a worrier?  YES  NO
26. Do you enjoy co-operating with others?  YES  NO
27. Do you tend to keep in the background on social occasions?  YES  NO
28. Does it worry you if you know there are mistakes in your work?  YES  NO
29. Have you ever said anything bad or nasty about anyone?  YES  NO
30. Would you call yourself ‘highly strung’?
31. Do you think people spend too much time safeguarding their future with savings & insurance?
32. Do you like mixing with people?
33. As a child were you ever cheeky to your parents?
34. Do you worry too long after an embarrassing experience?
35. Do you try not to be rude to people?
36. Do you like plenty of bustle & excitement around you?
37. Have you ever cheated at a game?
38. Do you suffer from ‘nerves’?
39. Would you like other people to be more afraid of you?
40. Have you ever taken advantage of someone?
41. Are you mostly quiet when you are with other people?
42. Do you often feel lonely?
43. Is it better to follow society’s rules than go your own way?
44. Do other people think of you as being very lively?
45. Do you always practice what you preach?
46. Are you often troubled about feelings of guilt?
47. Do you sometimes put off until tomorrow what you ought to do today?
48. Can you get a party going?
Part 3

Please rate the statements below in relation to your day-to-day experiences, indicating how frequently or infrequently you currently have each experience, i.e., from 1 (Almost Always) to 6 (Almost Never). Please answer according to what really reflects your experience rather than what you think your experience should be.

<table>
<thead>
<tr>
<th>Almost Always</th>
<th>Very Frequently</th>
<th>Somewhat Frequently</th>
<th>Somewhat Infrequently</th>
<th>Very Infrequently</th>
<th>Almost Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

1. I could be experiencing some emotion and not be conscious of it until some time later. 1 2 3 4 5 6
2. I break or spill things because of carelessness, not paying attention, or thinking of something else. 1 2 3 4 5 6
3. I find it difficult to stay focused on what’s happening in the present. 1 2 3 4 5 6
4. I tend to walk quickly to get where I’m going without paying attention to what I experience along the way. 1 2 3 4 5 6
5. I tend not to notice feelings of physical tension or discomfort until they really grab my attention. 1 2 3 4 5 6
6. I forget a person’s name almost as soon as I’ve been told it for the first time. 1 2 3 4 5 6
7. It seems I am “running on automatic,” without much awareness of what I’m doing. 1 2 3 4 5 6
8. I rush through activities without being really attentive to them. 1 2 3 4 5 6
9. I get so focused on the goal I want to achieve that I lose touch with what I’m doing right now to get there. 1 2 3 4 5 6
10. I do jobs or tasks automatically, without being aware of what I’m doing. 1 2 3 4 5 6
11. I find myself listening to someone with one ear, doing something else at the same time. 1 2 3 4 5 6
12. I drive places on ‘automatic pilot’ and then wonder why I went there. 1 2 3 4 5 6
13. I find myself preoccupied with the future or the past. 1 2 3 4 5 6
14. I find myself doing things without paying attention. 1 2 3 4 5 6
15. I snack without being aware that I’m eating. 1 2 3 4 5 6

If any part of this survey made you experience any unpleasant emotional reaction, or in any way triggered traumatic memories, please feel free use any of these services to help you deal with them:

Samaritans: ph.: 1850 60 90 90, email: jo@samaritans.org
Barnados: ph.: 1850 222 300, email: info@barnardos.ie