

An investigation into the influence of various sources of social support for Irish mothers, on their subjective feelings of loneliness and stress.

Aisling Byrne

x15752329

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Abstract

Objective: There is a scarcity of research surrounding the unique psychosocial and psychological issues faced during motherhood, which include: changes to a woman's social circle, and the potential onset of loneliness or increased stress. Existing literature indicates that perceived social support can buffer feelings of stress, and can be related to decreased loneliness; however, there are but a few studies showing this among mothers. The current study was designed to investigate how employment and partners as sources of support can moderate mothers' perceived stress and loneliness. Methods: 193 Irish mothers aged 19-49 took part in the current study. Participants' subjective feelings of loneliness, perceived stress and perceived social support were measured. Results: Women with part-time employment showed the lowest levels of both loneliness and stress. Also, those with partners/spouses displayed significantly lower levels of loneliness and stress. The combination of staying at home and being a single mother was indicative of much higher loneliness and stress. Notably, partnered/married, full-time working mothers experienced higher stress, despite having partners/spouses as support. Conclusions: Results show that mothers benefit greatly from having moderate hours of employment outside the home as a source of social support, as well as having a close source of emotional support. However, where work is full-time, parental stress can increase. Further research is needed to confirm the effects of these sources of support on mothers.

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Chapter 1. Introduction

Becoming a mother brings about many life changes, through the establishment of new routines and responsibilities (Belsky, Rovine & Fish, 1989). Becoming a mother for the first, and then perhaps a second time, requires a woman to adapt to changes to her body, identity, behaviour, relationships, and future prospects (Nicolson, 2006). These changes, together with a lifelong commitment that comes with parenthood, can have consequences for many psychological and life outcomes (Nelson, Kushlev & Lyubomirsky, 2014), and particularly for working women (Sayil, Güre & Uçanok, 2007).

Some of these outcomes can include changes in stress levels (Hansen, 2012; Nelson et al., 2014), and in one's social circle (Nelson, 2009; Parry, Glover & Mulcahy, 2013). While motherhood can be a stressful time in itself (Nelson et al., 2014), the decrease in social support experienced by modern-day mothers, as discussed by Parry et al. (2013), could cause stress levels to escalate further. Indeed, it has been argued that there is a consistently strong, inverse correlation between one's social support and levels of stress (e.g., Cohen & Wills, 1985; Hostinar & Gunnar, 2015). Furthermore, with women's support networks being potentially weakened by motherhood, there can be an increase in feelings of loneliness, since low support has frequently been related to higher levels of loneliness (e.g., Hudson et al., 2016; Stokes, 1985). Yet, there are huge gaps in the literature within the area of motherhood and it remains a construct that is largely ignored. Francis-Connolly (2000) states that the phenomenon is so common that researchers take it for granted, and this possibly explains the clear lack of research. Since motherhood remains a central issue for women generally, one would expect a far greater level of exploration into how women are affected by the fundamental changes it brings into their lives.

1.1 Defining motherhood: A social construct

The feminist philosopher Sara Ruddick (1995) refers to motherhood as a complex experience, and a continuously conscious activity for a woman. However, research on the experience of motherhood for the woman herself, is incredibly sparse, with much of the research available on motherhood showing a clear focus on the influence that certain parenting and attachment styles can have on outcomes for children. While this is undeniably an important area of research, there is little focus on the effects of mothering (or parenting) on the individual in that role, even though motherhood has been rated by women as the most salient role in their lives (Rogers & White, 1998). Crnic and Low (as cited in Ponnet et al., 2013), make the argument that sources of both support and stress are considered to influence an individual's method and style of parenting, and that this results in an impact on child outcomes.

However, to date, a large proportion of the literature has only discussed how stressors and levels of support can affect outcomes for children, and fail to examine outcomes for parents. It is also important to note that much of the research that is available on this topic is of a qualitative nature, leaving the area with few quantifications of the various outcomes for women as they adapt to and cope with motherhood.

As discussed by Francis-Connolly (2000), motherhood is a complex construct, and goes beyond the biological role of mothering, since it is made up of both 'macro' (parent-child relationship) and 'micro' (parent-environment relationship) components. Francis-Connolly (2000) describes how the macro/micro perspective offers a holistic view on the interactions between family, culture, ethnicity, economic and social resources, and also interpersonal experiences, each of which, it can be argued, make the experience of motherhood so unique for a woman.

In defining motherhood, it is important to note that a relatively recent paper interestingly suggested that motherhood and fatherhood may actually be identical, and should

therefore not be researched as separate constructs (Fagan, Day, Lamb & Cabrera, 2014). The authors' proposition is based on three premises, i.e., (i) that research already suggests that motherhood and fatherhood are the same; (ii) that many studies have shown that the influence of fathers and mothers on their children is the same; and (iii) that in the 21st century, the roles of mothers and fathers are becoming increasingly similar. A key argument in this paper is that quality caregiving is important and influential, regardless of the caregiver being male or female. This argument, being supported by an abundance of research, can be viewed as fair, yet it acknowledges only one perspective, i.e., the parent-child relationship, and ignores the parent-environment aspects of motherhood and fatherhood. Therefore, it could be argued that this paper refers to *parenting*, i.e., being in the role of mother or father to children, rather than the broader experiences of motherhood and fatherhood, which would include personal and psychological factors that exist outside of the parenting role.

Many studies, however, contradict the idea that motherhood is the same as fatherhood. For example, women who become mothers suffer penalties to their salaries of between 3% and 5%, although Anderson, Binder and Krause (2003) argue that this could be due to a reduced work effort. Also, women with children are 4% less likely than childless women to be given managerial roles in the workplace (Georgellis & Sankae, 2016). In contrast, men's wages can actually increase when they become fathers (Lundberg & Rose, 2000), while fathers are also more likely (3%) than childless men to become managers at work (Georgellis & Sankae, 2016). Maume (2006) posits that women prioritise family over work, leading to an increased likelihood of mothers leaving their employment, since the mother is usually the primary caregiver to children, as argued by Hochschild and Machung (2012).

If motherhood is made up of multiple intertwined, complex, macro and micro strands, then the above example may well suggest that motherhood remains its own construct,

regardless of the roles of mother and father becoming increasingly similar (Fagan et al., 2014). Indeed, when comparing parenting outcomes for children, as discussed by Fagan and colleagues, the two constructs can appear to be identical, but it can be strongly argued that the perceptual experience of being a mother is essentially different from the experience of being a father. The recommendation by Fagan and colleagues (2014) that researchers should avoid distinguishing between motherhood and fatherhood could indeed be a factor to be considered in future studies of parenting styles. However, there still remains a clear paucity of research into motherhood and fatherhood as perceived experiences that are comprised of a wide range of interacting factors. This gap in the literature can only be filled by a vast increase in research into the area.

Finally, the concept of motherhood is something that has changed in definition over time. Definitions have progressed from the belief in the past that motherhood is no more than a woman's ability to reproduce and rear children, to the current perception of motherhood as a social construct that is not only influenced by culture and history, but is refined in its definition by each woman in her day-to-day interactions, at home, and at work (Francis-Connolly, 2000).

1.2 Social support

At a basic level, social support is an everyday occurrence within interpersonal relationships, and does not refer to support only received in times of crisis (Barnes & Duck, 1994), which was a suggestion made by the stress-buffering hypothesis (Cohen & McKay, 1984; Cohen & Wills, 1985, Landerman, George, Campbell & Blazer, 1989). Various definitions of social support have been offered throughout the years, some focusing on the sources of social support, while others focus on its aims and outcomes for well-being.

Generally, it is widely accepted that *social support* refers to the availability of social resources, both real and perceived. Hawkley and Cacioppo (2010) describe social support as a ‘scaffold’ that protects the self, arguing that any damage to or interference with this scaffold would cause the sense of self to disintegrate. This analogy enables us to understand the deep significance of social support for the individual.

House (1981) proposed that social support is an interpersonal process of transaction that comes in the form of either emotional support, instrumental support, informational support, or appraisal support. These four types of support account for a wide range of situations in which an individual may be assisted, guided or helped either emotionally or physically. For example, in the workplace, appraisal support can be received in the form of feedback or affirmation, while informational support can be provided in an unfamiliar setting, e.g., through staff at a helpdesk. In addition, House’s theory accounts for more personal transactions of support, such as the receiving of emotional support from one’s family members whether it be on a day-to-day basis, or during an emotionally stressful period, or instrumental support, e.g., receiving financial assistance when needed.

A recent definition by Mattson and Hall (2011), says that social support is a reciprocal communicative process which includes both verbal and non-verbal communication, that “aims to improve an individual’s feelings of coping, competence, belonging and/or esteem” (p. 184). The authors mention the importance of distinguishing between received and perceived support. The two are visibly distinct (Haber, Cohen, Lucas & Baltes, 2007; Thoits, 1995; Uchino, 2009), and are even rated differently when agreement within dyads is measured on instances of enacted (received) support and perceived support, showing that dyads agree less on instances of perceived support (e.g., Birditt, Antonucci & Tighe, 2012; Cohen, Lakey, Tiell & Nielly, 2005).

Received (or actual) support refers objectively to the actions provided to an individual by those in their network. What could be more important, though, is an individual's *perceived* level of support –this is the subjective belief that there is support available to the individual within their network, and refers to the level to which one is satisfied with the level of support around them (Haber et al., 2007).

According to Thoits (1995), social support has become the most commonly investigated psychosocial resource. However, there has been little research conducted on the influence of social and other sources of support available to women during the transition to motherhood (Goldstein, Diener & Mangelsdorf, 1996) and during motherhood generally. Moreover, a significant portion of the few studies available focus only on the *transition and adaptation* to the motherhood role.

1.3 Stress

Baum (1990) defines stress as an emotional experience that incurs sudden changes, which can be physiological, biochemical and/or behavioural. This experience is the result of a transaction between the individual and their environment, where there is a perceived demand that is taxing on their resources (Lazarus and Folkman, 1984). This is essentially what is meant by the term *perceived stress*. As mentioned earlier, the role of parenthood can bring significant changes into one's life, with stress being one of the most noteworthy changes that can occur.

1.3.1 Parental stress. A report by the American Psychological Association (2015) states that parents, with children below the age of 18 living in the household, were more likely than 'non-parents' to report an increase in stress levels, in the year prior to being surveyed. Additionally, 51% of parents reported having been kept awake at night due to

stress in that particular month, compared with 39% of non-parents: a notable contrast between the two groups. These statistics reflect findings from McMullin and Marshall (1996) whose study concluded that parents were more stressed than their childless peers. Goldstein, Diener and Mangelsdorf (1996) included in their paper that motherhood can be a stressful time for a woman. However, being a parent is only one factor that causes a mother to feel stressed. As discussed by Belsky (1984), the stress experienced by a parent is attributable to a large context, in that *parental stress* is result of an accumulation of various stressors in one's life. In comparison to *parenting* stress, i.e., stress associated solely with child-rearing, *parental* stress is the result of the demands of child-rearing, when paired with other circumstances outside one's family life, i.e., social, environmental, financial, and employment factors.

1.4 Loneliness

In defining loneliness, it is extremely important to clarify that loneliness is *not* synonymous with having a lack of social bonds, but rather, is related to one's subjective feeling that they lack the connections they desire. This point – that 'aloneness' does not equal to 'loneliness' – has been noted as important by many researchers, since some individuals may truly enjoy being alone and away from others, without feeling lonely, while others can feel lonely even when surrounded by friends and family (e.g., Peplau & Perlman, 1982). Peplau and Perlman (1982) discussed how loneliness is the result of a perceived disparity between one's desired and actual level of social connections.

Another point worth noting is that in the literature, loneliness is indicated to be a universal phenomenon, in contrast to the common notion that loneliness is mainly experienced in old age. Research findings have included that loneliness is a common feeling

during childhood (Lempinen, Junttila & Sourander, 2017), in adolescence and young adulthood, (with 43% of 18 to 24-year-olds in one study reporting feelings of loneliness) (Perlman, 1991), while the highest rates of loneliness can be seen in older adulthood (Luhmann & Hawkley, 2016). However, because evidence has shown a slight dip in the rates of loneliness experienced during middle adulthood (Hawkley & Cacioppo, 2010), it is evident from the literature that research studies have focused to a larger degree on loneliness in adolescents, younger adults (18-24), and older (70+) adults. Undeniably, the gap between these age-groups is large, and according to the Irish Central Statistics Office [CSO] (2016), the average age for women in Ireland to give birth to their *first* child, as of 2015, is 29.6 years of age – an age which falls directly within this gap in the literature on loneliness. With participants in a study by Parry et al. (2013) highlighting that deep feelings of loneliness can be experienced in motherhood, the lack of research on middle adulthood loneliness, and particularly on loneliness in motherhood, is rather concerning.

Further, a recent report in the UK named *It Starts with Hello* found that over half of the 2,000 parents (aged 18+) surveyed, had experienced an issue with loneliness, and around 20% stated that they had felt lonely during the week that the poll took place (Action for Children, 2017). Although these statistics do not give an insight into mothers' loneliness specifically, they highlight that there is, nonetheless, an issue of potential loneliness for parents. In this report, loneliness in parenthood is attributed to the changes experienced, e.g., reduced financial resources, less time for socialising, and an overall change in daily routines.

1.5 Empirical research regarding the effects of social support, loneliness, and stress

As a result of extensive amounts of research, both loneliness and a lack of social support are known to have fairly negative effects on both mental and physical health

(Berkman, Glass, Brisette & Seeman 2000; Holt-Lunstad et al., 2015). In addition, some studies have also found that mortality rates are significantly higher for those experiencing increased loneliness (Henriksen, Larsen, Mattisson & Andersson, 2017), and for those with less social support (Brummett et al., 2001; Hibbard and Pope, 1993). While the participants in the latter two studies were patients suffering from cardiovascular disease, and cancer, respectively, the sample presented by Henriksen et al. did not come from a clinical population and therefore, it would appear that social support and perceived social support are universally important.

Apart from having a potential impact on physical health, loneliness has also been related to issues of mental health. A paper by Jaremka and colleagues (2014) examined two longitudinal samples of (a) cancer survivors, compared with non-cancer controls, and (b) Alzheimer's disease and dementia caregivers, compared with non-caregiving controls. When examining how loneliness can impact on participants' levels of depression, pain, and fatigue, they found, across both samples, (and even among controls), that loneliness was a risk factor for all three of these negative outcomes over time. Again, this adds support to the theory that feeling lonely can have negative consequences for one's health.

1.5.1 Sources of support. Some research demonstrates that different sources of social support (e.g., family, friends, romantic partners, occupation) can sometimes be more protective from loneliness than other support sources. For example, Lee and Goldstein (2016) saw in a diverse sample of university students that support from friends and a romantic partner was associated with less loneliness than support from the family. A similar finding came from Luhmann and Hawkey (2016), whose study found that middle-aged adults who were single showed higher levels of loneliness than those who had romantic partners. What is even more notable about this finding is that those who had partners but were not cohabiting, were still significantly less lonely than single individuals. To further add to this idea, there is

evidence that physical touch is an effective method of offering support in stressful circumstances, through hugging (Cohen, Janicki-Deverts, Turner & Doyle, 2015) and hand-holding (Grewen, Anderson, Girdler & Light, 2003). These four findings combined can suggest that support received or perceived from an intimate source, i.e., a significant other, can be highly influential for an individual, even where relationships do not involve cohabitation.

Related to the previous point, Nelson and colleagues (2014) describe in their paper that the definition of 'single' differs across the parenthood (and motherhood) literature, making it difficult to infer what the true effects of companionship are, when addressing multiple independent studies. Also, Raley (2001) mentions that cohabitation and child-rearing outside of marriage are a common phenomenon. Therefore, it may be more effective for research in this area to examine *partnership* status as opposed to marital status, from this point. This would help to understand how having a partner, regardless of their being a spouse and/or cohabitant, can be a key source of social support during parenthood.

1.5.2 Outlets for mothers. D'Ercole (1988) conducted a study with single, working mothers, and found that co-worker support related to positive wellbeing among participants. Additionally, Telleen, Herzog and Kilbane (1989) showed that attendance at a family support programme promoted less parenting stress and social isolation for mothers. Thirdly, Ogunsiyi and Wilkes' 2005 study found that single mothers who were attending university attributed their overall good health and self-esteem to being at university. Finally, a more recent study concluded that levels of postpartum-depressive symptoms were lower for those mothers who had employment and high support from sources other than their partners (Gjerdingen, McGovern, Attanasio, Johnson & Kozhimannil, 2014). Each of these four findings suggest that having a source of support or social network outside of the home, as opposed to relying

solely on support from a significant other or family, can be psychologically beneficial for mothers, and particularly for single mothers. Loneliness and a lack of social support have been linked to various mental health issues, such as depression (Cacioppo, Hughes, Waite, Hawkley & Thisted, 2006), higher rates of suicidal ideation (Casey et al., 2006), and alcoholism (Hawkley & Cacioppo, 2010), to name but a few. It is essential, therefore, to note the outlets that can minimise these potential issues for mothers, and why they do so.

Such outlets include any form of social engagement which give the individual a role outside of their family life, such as an occupation or being a member of a group/society. Berkman, Glass, Brissette and Seeman (2000) explain the idea of having roles outside of parenting, stating that a social role gives the individual a sense of belonging and attachment, which leads to one feeling valued, and experiencing an overall positive impact on their sense of self. This suggestion is logical, since having such an outlet can give meaning to one's life as well as offering a sense of reciprocal obligation to one's extended community. Of course, while being obligated to one's family *is* a major example of this, it is important, for a mother, to engage socially in other areas of her life as well. This is based on the acknowledgement by some researchers that spousal support for married mothers is important, but when this is the source of support most highly relied upon, both partners in the marriage can suffer (Parry et al., 2013). From this it can be gathered that a mother, even with the support of a spouse, can benefit from having additional support in other areas in her life. Furthermore, this can be beneficial from the perspective that an outlet such as employment provides a mother with the opportunity to be temporarily relieved of difficult domestic and childcare responsibilities (Glass & Fujimoto, as cited in Woo, 2009).

On the other hand, as suggested by Multiple Role or Role Conflict theory (Katz & Kahn, 1978), employment can potentially increase levels of stress for a working mother, despite their having the advantage of a larger social network than stay-at-home mothers. This

theory posits that it can be difficult to balance the role of being a mother with attendance at a place of work. As discussed by Woo (2009), this would have consequences for both the time available to a mother (e.g., Voydanoff, 2005), and for her psychological involvement in each role (e.g., Frone, 2003). Work-related stress can interfere with one's family life (known as *work-family* conflict) (Fu & Shaffer, 2001) and complaints relating to this issue come more often from women than from men (Duxbury, Higgins & Lee, 1994). Moreover, Hibel, Mercado and Trumbell (2012) investigated levels of cortisol (a stress hormone) in working mothers, and found that cortisol levels were higher on mornings when mothers had to tend to their children whilst preparing for work. From this perspective, therefore, it could be concluded that work and family may not be strongly compatible, and could both be related to increased role-conflict and stress levels for mothers, due to the difficulty in efficiently balancing time and psychological effort between the two roles (Woo, 2009). Despite this significant and empirically supported theory, there is a large body of research which indicates that working as a mother can outweigh the risks of experiencing work-family conflict.

There are also some factors that can influence the potential occurrence of work-family conflict for mothers. An example of this may be the number of hours worked, as Woo (2009) reported that there were psychological benefits for mothers who worked less than 35 hours per week. This may suggest that a moderate number of hours worked outside the home, away from the responsibilities of childcare, can be beneficial to a mother. Another example of a positive factor for mothers in employment is that when in a more supportive workplace, work-family conflict occurs to lesser degree (Byron, 2005). In addition to this, Mesmer-Magnus, Murase, DeChurch, and Jimenez (2010) stated that in the workplace, co-workers can provide support in various ways, and this factor may add to a mother's ability to balance employment with parenting.

1.6 The current study

1.6.1. Rationale. Despite the limited research on this particular topic, a number of studies provide evidence of employment status as enhancing parents' well-being, through its effect on social roles and reduced financial strain. Others suggest how partners and spouses can be the most beneficial sources of support for an individual.

Many studies have focused on the interacting relationships between social support, stress, and loneliness, but a great proportion of these used clinical samples, or, instead, included samples of university students and adolescents. Few studies seem to have included all three variables in a sample of mothers. Since many publications, within the sparse amount of existing literature, are now up to three decades old, it may indeed be beneficial to now conduct more research on the levels of stress and loneliness in mothers, in relation to work and partnership status.

To a certain extent, the current study intends to build on the contribution by Woo (2009), who recommended that future research should measure the effects of various sources of social support on working mothers. In fact, the current study would aim to investigate how findings by Woo (2009) might replicate in an Irish sample, particularly the finding that part-time working mothers suffer higher levels of distress.

For the purposes of the current research, it was decided that mothers who are employed but on leave, and mothers who are working from home, would be categorised along with unemployed mothers in a 'stay-at-home mothers' category. There were two reasons for this decision: (a) gathering a sample size large enough to have five distinct groups would be rather difficult, and (b) the research intends primarily to establish how mothers are affected by having an occupational outlet of some degree.

As mentioned earlier, during the design process of the current study, points discussed by Nelson et al. (2014) and Raley (2001), led to the decision to measure partnership status as opposed to marital status. This would effectively account for participants who may be unmarried mothers but cohabiting with a partner.

In relation to the design of the current study, the decision to target mothers (as opposed to parents) who had at least one child under the age of twelve, was based on main three factors, i.e., (i) that mothers are the primary caregivers to children (Hochschild & Machung, 2012), (ii) that younger age among children is linked to greater parental demands (Mowder, Harvey, Moy & Pedro, 1995), and (iii) that *empty-nest* parenthood is the term used when one's children have grown up and left the family home (Nelson et al., 2014).

1.6.2 Aims. The aims of the current research are to contribute to the existing literature on motherhood, by determining (i) how various sources of social support can moderate mothers' feelings of loneliness and perceived stress, (ii) how employment status and partnership status might influence these feelings, (iii) the differences, if any, between mothers who work part-time and full-time; and (iv) whether partnership status and employment status interact to create significantly positive or negative outcomes for loneliness and stress levels.

1.6.3 Hypotheses. Based on the literature and aims discussed, the following hypotheses were formed:

Hypothesis 1: Perceived social support will be negatively correlated with (a) perceived stress levels, and (b) loneliness levels.

Hypothesis 2: Employment will incur differences to average scores on perceived social support, loneliness, and perceived stress measures, specifically: (a) an increase in perceived social support even where work is just on a part-time basis, (b) a decrease in loneliness even where work is just on a part-time basis, and (c) a decrease in perceived stress for part-time working mothers, while it is unclear whether this will further decrease for full-time working mothers.

Hypothesis 3: Partnership would incur differences in average scores on perceived social support, loneliness, and perceived stress measures, specifically: (a) an increase in total perceived social support and perceived significant-other social support, compared to single mothers; (b) a decrease in loneliness compared to single mothers; and (c) a decrease in perceived stress levels in comparison to single mothers.

Hypothesis 4: By investigating groups within the sample such as ‘stay-at-home, single mothers’ in comparison to ‘partnered working mothers’, it is hypothesised that mothers who stay at home and do not have a partner would be (a) the loneliest, and (b) the most stressed group within the sample.

Chapter 2. Methods

2.1 Participants

For the present study, 193 women were recruited from all across Ireland. Age data, however, was available for only 70.5% of the participants (Mean age = 34.27, SD = 6.91, Median = 35).

The sample was gathered between the 13th of December 2017 and the 16th of February 2018 through the social network, *Facebook*, where a number of groups aimed specifically at Irish women/mothers were accessed. All participation was voluntary, meaning that the sample gathered was of an opportunistic nature, and was the result of convenience sampling. There was also an element of snowball sampling used, in cases where participants could share the questionnaire outside of these *Facebook* groups, with other women known to them who may also have been interested in taking part. Inclusion criteria for the present study were as follows: all participants were required to: (a) be over the age of 18, and (b) to have had at least one child within the twelve years prior to recruitment for the study, i.e., between the years 2005 and 2017 inclusive. For the present study, rather than measuring 'marital status', it was decided to categorise participants as either (a) having a partner/spouse, or (b) being single.

At the time of data collection, approximately 30.1% of the sample were working full-time, approximately 28.5% were working part-time, and approximately 33.2% were unemployed. A further 5.2% were on maternity or other leave from work, and a final 3.1% (or thereabouts) stated that they were working from home rather than reporting to a place of work. It is important to reiterate that that the study sought to investigate the social integration

aspect of a mother attending a place of work, as opposed to staying at home. This means that, following data collection, those listed as ‘working from home’ or ‘on leave’ were ultimately merged with the 33.2% of the sample responding as unemployed, and this total of 41.5% were categorised as ‘stay-at-home mothers’.

2.2 Design

The present study was quantitative in nature, and employed a cross-sectional, correlational design. The variables of interest were perceived social support, loneliness, and perceived stress, with all three being the dependent variables for all hypotheses. Also included were partnership-status and employment-status variables, and these were independent variables for testing all hypotheses – with the exception of hypothesis 1.

2.3 Measures

All data was gathered anonymously through an online questionnaire, created on docs.google.com. Included with the questionnaire was an information sheet, and this was followed by the questions relating to informed consent. The questionnaire itself was comprised of (1) demographic questions, (2) three separate psychological scales, and (3) a debriefing page.

Upon commencement of participation, three initial demographic questions were asked, all of which required mandatory responses. It should be noted that the same requirement was applied to all items in the three subsequent scales. To obtain information on the participants' employment and partnership statuses, a ‘tick-the-box’ approach was employed. For the question relating to age, participants were required to respond with a numeric value. Unfortunately, this latter question was only added to the questionnaire after

the commencement of the study, resulting in an omission of age details for 57 out of the full sample of 193 participants.

The first version of UCLA Loneliness Scale (Russell, Peplau & Ferguson, 1978), which is a twenty-item scale, was the first scale for participants to answer. In terms of Cronbach's coefficient ($\alpha = 0.96$), the scale is high in internal reliability. The items in this scale are presented as statements such as "I am unhappy doing so many things alone", and a four-point Likert scale is used to indicate the frequency with which the individual feels that way. The points on this Likert scale are 'O' = *often*; 'S' = *sometimes*; 'R' = *rarely*; and 'N' = *never*. Each of these letters corresponds to a score, to enable the researcher to calculate the total score of each participant for the scale by addition, i.e., all 'O' responses = 3, all 'S' responses = 2, all 'R' responses = 1, and all 'N' responses = 0. Consequently, scores for this scale can range from 0 to 60, where 0 would indicate that one is not at all lonely, and 60 would indicate one is feeling extremely lonely. See Appendix A for the full UCLA Loneliness Scale.

The second scale used was the Perceived Stress Scale (Cohen, Kamarck & Mermelstein 1983; Cohen & Williamson, 1988); a ten-item scale measuring participants' perceived stress levels in situations throughout the month prior to participation. The PSS-10 also has a high internal reliability, with Cronbach's coefficient values ranging from $\alpha = .84$ to $.86$ across three original samples examined by Cohen, Kamarck and Mermelstein (1983). According to Lee (2012), who conducted a review of the literature employing the three variants of the PSS (the 4-item, 10-item, and 14-item versions), the PSS-10 is superior to the PSS-4 and PSS-14 for measuring perceived stress. For this reason, PSS-10 was the chosen variant for this study. A five-point Likert scale is used for responses to each item in the scale, ranging from 0 to 4. Each question measures how frequently a participant had felt a particular way (0 = *never*; 1 = *almost never*; 2 = *sometimes*; 3 = *fairly often*; 4 = *very often*). For

example, one item is phrased as “In the last month, how often have you been upset because of something that happened unexpectedly?”. Within the PSS-10, there are four positively-stated items, i.e., items 4, 5, 7 and 8, which must be reverse-coded by the researcher, before calculating participants’ total scores. Similar to the UCLA Loneliness scale, total scores are calculated by adding all numerical values together. Despite this, there are no specific cut-offs for scores indicating high, medium, or low stress levels in the PSS-10, although higher scores generally indicate higher stress. See Appendix B for the full Perceived Stress Scale.

Thirdly, to better understand participants’ feelings of loneliness and stress through gaining information about their interpersonal relationships i.e., with family members, friends, or a significant other, it was decided to use the Multidimensional Scale of Perceived Social Support (known as the MSPSS) by Zimet, Dahlem, Zimet and Farley (1988). The MSPSS also has high internal reliability ($\alpha = .88$), while this is also the case with the three subscales, i.e., family ($\alpha = .87$); friends ($\alpha = .85$); and significant other ($\alpha = .91$). This is a twelve-item scale, with each of those three subtypes of support being measured by four separate items. Items are phrased as statements, e.g., “There is a special person who is around when I am in need”, to which participants respond on a seven-point Likert scale, indicating the degree to which they agree with each statement. For example, a response of ‘1’ would indicate one *very strongly disagrees*, ‘4’ would indicate they are *neutral*, and ‘7’ indicates they *very strongly agree*. To calculate participants’ overall scores, the sum of all 12 responses is calculated and then divided by 12. For scores on the 'significant other' subscale, scores from items 1, 2, 5, and 10 are added, before being then divided by 4. This same method is used for both the family subscale, which is measured in items 3, 4, 8 and 11, and for the friends subscale, which is measured in items 6, 7, 9, and 12. The developers of the MSPSS have suggested that a mean score (on the overall scale) of 1 to 2.9 would be considered as low social support, 3 to

5 would be considered moderate social support, and 5.1 to 7 would be considered high social support. See Appendix C for the full Multidimensional Scale of Perceived Social Support.

2.4 Procedure

2.4.1 Ethical considerations. It was not expected that any significant ethical issues would arise during the research process, primarily because the target population did not include individuals belonging to any particularly vulnerable groups, such as children or the elderly. However, as the questionnaire required participants to consider and discuss feelings of loneliness and stress, there was a possibility that some individuals could indeed experience psychological distress in the process. However, it was hoped that any possible psychological distress would not be prolonged, or go beyond general, day-to-day feelings of loneliness and/or stress. It was therefore determined that the magnitude of any potential distress experienced by participants would not outweigh the benefits of conducting the study. Nevertheless, steps were taken to minimise the likelihood of participants experiencing any psychological distress.

To address the aforementioned issues, all potential participants were presented with an online information sheet and consent form before agreeing to take part. Key details included in this sheet were: (1) that participation would be both voluntary and anonymous, (2) that there were no major risks or rewards related to participation, and (3) that participation would only require a once-off completion of a questionnaire, requiring no more than fifteen minutes of participants' time. Both the aim of, and reason for the study were clearly outlined in the information sheet. In addition, to allow participants to make enquiries about the study, full contact details of the researcher and research supervisor were also provided. Furthermore, to address the possibility that some participants could be affected by the discussion of perceived levels of loneliness and stress, contact details for the *Samaritans* organisation were

also included in the information sheet. At the outset, participants were informed of the following: (1) personal details, such as names or e-mail addresses were not required; (2) following participation in the study, data collected would not be identifiable; and (3) withdrawal of participation *would* be possible at any stage during the data collection process, but that anonymity after submission of responses would make it difficult for the researcher to later withdraw any participants' data. It was hoped that the assurance of anonymity, in particular, would encourage participation in the study. In addition to the items detailed above, three statements were also included on the information sheet. To grant their informed consent to the study, participants were required to choose the 'Yes' option to each statement. See Appendix D for the full information sheet and consent form.

On completion of the questionnaire, participants were provided with a short debriefing sheet. Within this sheet the aims of the study were reiterated, as were the main benefits and risks. Contact details of both the researcher and research supervisor, as well as the *Samaritans*, were all repeated. As the option to submit responses was inserted *below* this sheet, participants were enabled (even at this stage) to reverse their decision to take part. Participants were reminded that submitting responses would make it difficult for the researcher to later remove their data, due to it being anonymous. Finally, participants were thanked for giving their time to complete the questionnaire. See Appendix E for the full debriefing sheet.

2.4.2 Procedure followed in the present study. To allow for data collection, a public questionnaire was created using the *Google Docs* website. This questionnaire was linked on a social networking platform, *Facebook*, within groups relevant to the intended population. These groups were all aimed either at Irish women or at Irish mothers, and were

open to membership for any woman living in Ireland. Some of the groups were not located nationwide, but were targeted, instead, at women living in various counties within Ireland, including Cork, Dublin, Louth, Offaly, Roscommon, Westmeath, Wexford, and Wicklow. It was predominantly within these groups that the present sample (N = 193) was gathered. In addition, some participants, having completed the questionnaire, subsequently sent the online link to friends and relatives outside of the groups, and these may also have chosen to participate. In order to gather a moderately-sized sample, it was necessary to make frequent use of *Facebook* and to retain contact with these groups. It should be noted that recruitment of the groups ceased after a time period of two months.

Once recruitment was complete, the questionnaire was closed publicly, and a *Microsoft Excel* spreadsheet containing all individual responses to each item, was downloaded from the *Google Docs* website. To prepare for later statistical analyses, the data in this file was entered into *IBM SPSS Statistics 24.0*.

Chapter 3. Results

3.1 Descriptive Statistics

3.1.1 Frequencies. Table 1 displays frequency statistics for all categorical variables in the present data. Each categorical variable assessed the demographics of the current sample.

Table 1

Frequencies for the current sample of Irish mothers on each categorical, demographic variable ($N = 193$).

Variable	Frequency	Valid Percentage (%)
Partnership status		
Single	65	33.7
In a relationship or married	128	66.3
Attendance of employment status		
Stay-at-home mothers	80	41.5
Working part-time	55	28.5
Working full-time	58	30.1
Participant group		
Stay-at-home, single mothers	29	15.0
Stay-at-home, partnered mothers	51	26.4
Working, single mothers	36	18.7
Working, partnered mothers	77	39.9

3.1.2 Reliability statistics. Reliability statistics for the three scales employed in the current study – UCLA Loneliness Scale (Russell et al., 1978), the Perceived Stress Scale (Cohen et al., 1983; Cohen & Williamson, 1988), and the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) – were obtained using Cronbach’s alpha reliability coefficient. Reliability of all three subscales within the MSPSS was calculated also. All Cronbach’s alpha values below indicate high internal consistency within the scales.

Table 2

Reliability statistics for variables

Variable	Number of items	Cronbach’s alpha (α)
UCLA Loneliness Scale	20	.96
PSS	10	.73
MSPSS	12	.95
MSPSS ‘Significant Other’ subscale	4	.95
MSPSS ‘Family’ subscale	4	.92
MSPSS ‘Friend’ subscale	4	.96

3.1.3 Descriptive statistics. Descriptive statistics for all continuous variables in the current dataset are presented in Table 3. Normality of the data was assessed simultaneously by checking histograms for each variable. In each histogram, variables displayed a relatively normal distribution, which is also evident by the similarities between mean and median values for each variable listed below. Also, the close 95% confidence intervals for mean values indicate reasonably normally distributed data. By assessing normal Q-Q plots and

boxplots, it was evident that there were no extreme outliers in responses to any of the three scales.

This approximately normally distributed data suggests that the present sample is reasonably representative of the wide population of Irish mothers.

Table 3

Descriptive statistics for all continuous variables in the data

	Mean (95% Confidence Intervals)	Std. Error Mean	Median	SD	Range
Age	34.27 (33.10- 35.44)	.59	35	6.91	19-49
UCLA loneliness total score	28.02 (25.80- 30.24)	1.13	26	15.63	0-58
Perceived stress total score	21.74 (20.91- 22.57)	.42	22	5.85	6-36
Social support total score	4.54 (4.31- 4.76)	.12	4.67	1.60	1-7

‘Significant other’ (S/O) subscale total score	4.85 (4.58- 5.12)	.14	5.25	1.89	1-7
‘Family’ subscale total score	4.52 (4.27- 4.77)	.13	4.75	1.77	1-7
‘Friend’ subscale total score	4.23 (3.96- 4.50)	.14	4.75	1.91	1-7

3.2 Inferential Statistics

3.2.1 Correlation analysis to test hypothesis 1. The relationship between perceived social support and perceived stress was investigated using Pearson product-moment correlation coefficient. Prior to this, preliminary analyses were conducted to assess and ensure that the assumptions of normality, linearity and homoscedasticity were not violated. There was a weak-to-moderate, negative correlation between the two variables ($r = -.23, n = 193, p < .01$). This indicates that the two variables share approximately 5% of variance in common. This result therefore suggests that high levels of perceived social support are associated with lower levels of perceived stress.

Next, the relationship between perceived social support and levels of loneliness was examined, also using Pearson product-moment correlation coefficient. Results showed a moderate-to-strong, negative correlation between the two variables ($r = .52, n = 193, p < .001$). This indicates that the variables share approximately 27% of variance in common. This

relationship suggests that higher levels of social support are associated with lower levels of loneliness.

After investigating hypothesis 1, relationships between all other variables were also investigated, using Pearson product-moment correlation coefficient. Results of these correlations can be found in Table 4.

There was a weak, negative correlation seen between age and loneliness levels ($r = -.20, n = 136, p < .05$). It is indicated that the two variables share approximately 4% of variance in common. This correlation suggests that lower/younger age was associated with higher levels of loneliness.

There was a moderate, positive correlation between loneliness and perceived stress levels ($r = .48, n = 193, p < .001$). This indicates that the two variables share approximately 23% of variance in common. The result of this correlation indicates that higher loneliness levels are associated with higher levels of perceived stress.

Of all three subscales within the MSPSS, the 'friend' measure was most strongly, negatively correlated to loneliness levels ($r = -.50, n = 193, p < .001$). This indicates that friend social support shares approximately 25% of variance in common with loneliness, and the result indicates that higher levels of perceived support from friend sources are correlated with lower levels of loneliness.

Also, both the friend and family subscales displayed equal weak-to-moderate negative relationships with perceived stress scores ($r = -.21, n = 193, p < .01$). Approximately 4% of variance was shared between the subscale variables and the perceived stress variable. These results indicate that higher levels of perceived support from friend and family sources are associated with lower levels of perceived stress.

Table 4*Correlations between all continuous variables*

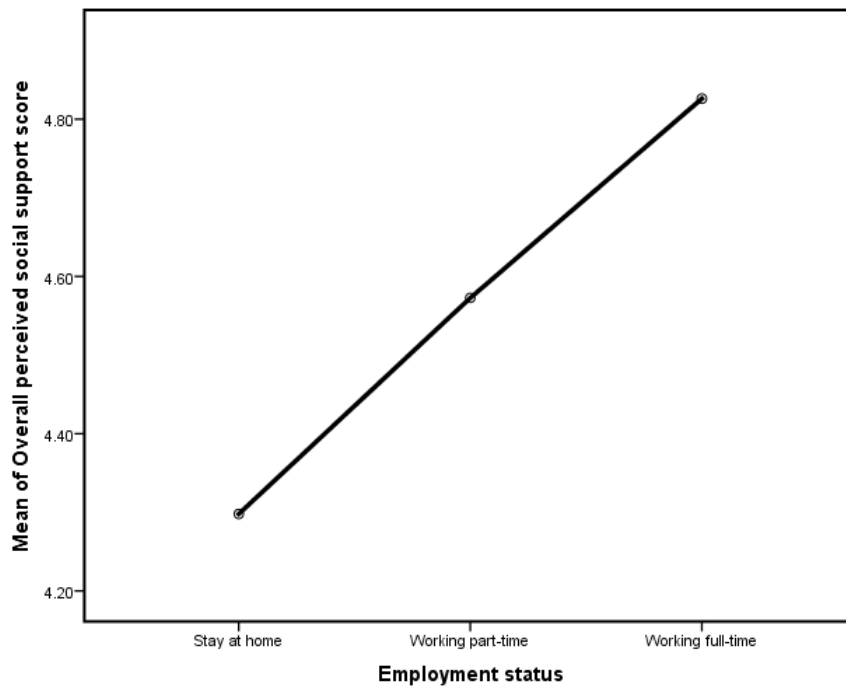
Variables	1	2	3	4	5	6	7
1. Age	1						
2. Loneliness	-.20*	1					
3. Perceived stress	-.12	.41***	1				
4. Overall MSPSS	.07	-.52***	-.23**	1			
5. MSPSS – S/O	.07	-.44***	-.19**	.87***	1		
6. MSPSS - family	.03	-.42***	-.21**	.86***	.62***	1	
7. MSPSS - friend	.07	-.50***	-.21**	.87***	.62***	.62***	1

Note. Statistical significance: * $p < .05$; ** $p < .01$; *** $p < .001$

3.2.2 One-way analyses of variance for employment status: Testing hypothesis

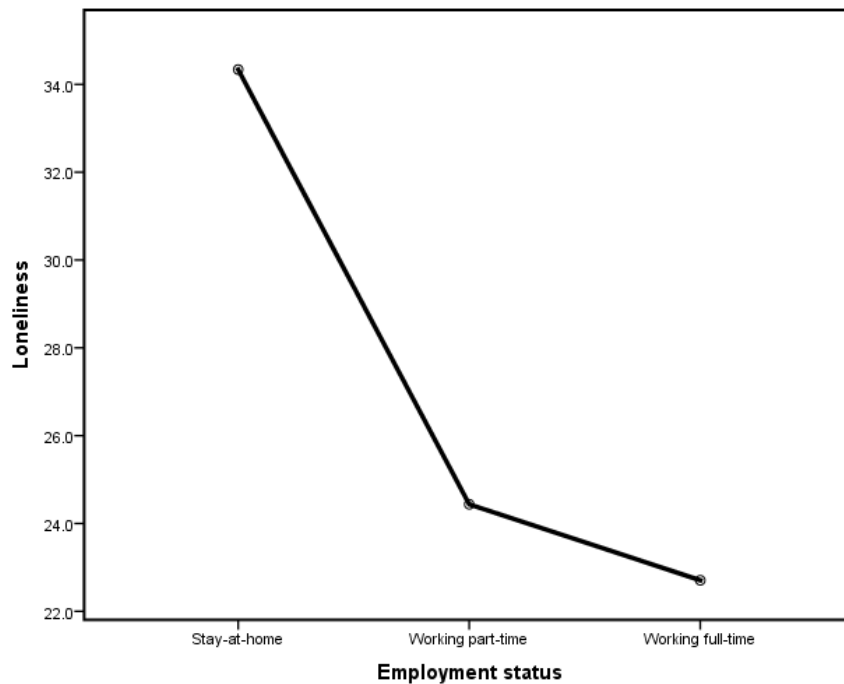
2. Three one-way between-groups analyses of variance (ANOVAs) were conducted, to compare mean scores of employment status groups (stay-at-home mothers, part-time working mothers, and full-time working mothers) on all three variables measured. Results of these ANOVAs can be seen in Figures 1, 2 and 3.

Figure 1



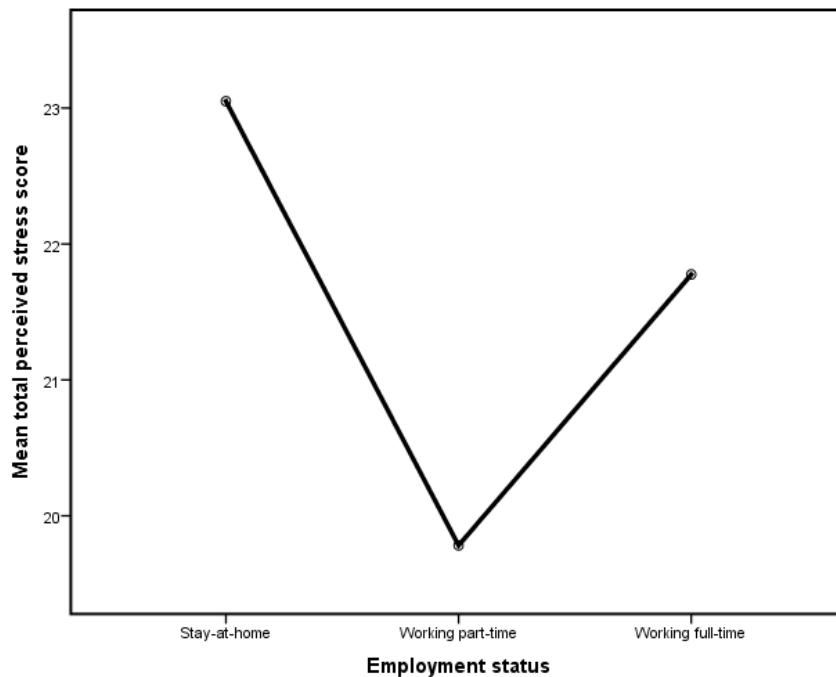
There was no statistically significant difference in perceived social support scores between the three employment groups $F(2, 190) = 1.86, p = .16$. $F(2, 85) = 1.30, p = .28$. The effect size indicated a very small difference in scores for perceived social support (eta squared = .02). The Tukey HSD test for post-hoc comparisons indicated that the mean perceived social support score for stay-at-home mothers ($M = 4.30, SD = 1.61$) was not significantly lower ($p = .60$) than part-time working mothers ($M = 4.57, SD = 1.68$) or full-time working mothers ($p = .14; M = 4.83, SD = 1.51$). There was no statistically significant difference in mean scores between part-time working and full-time working mothers ($p = .68$). See Figure 1 for this result.

Figure 2



There was a statistically significant difference in loneliness scores for the three employment groups $F(2, 190) = 12.71, p < .001$. The effect size indicated a medium-to-large difference in loneliness scores (eta squared = .13). A Tukey HSD test was run for post-hoc comparisons and indicated that the mean loneliness score for stay-at-home mothers ($M = 34.49, SD = 15.42$) was significantly higher ($p = .001$) than part-time working mothers ($M = 24.44, SD = 14.75$) and full-time working mothers ($p = <.001; M = 22.71, SD = 13.78$). There was no statistically significant difference in mean loneliness scores between part-time and full-time working mothers ($p = .81$). See Figure 2 for this result.

Figure 3



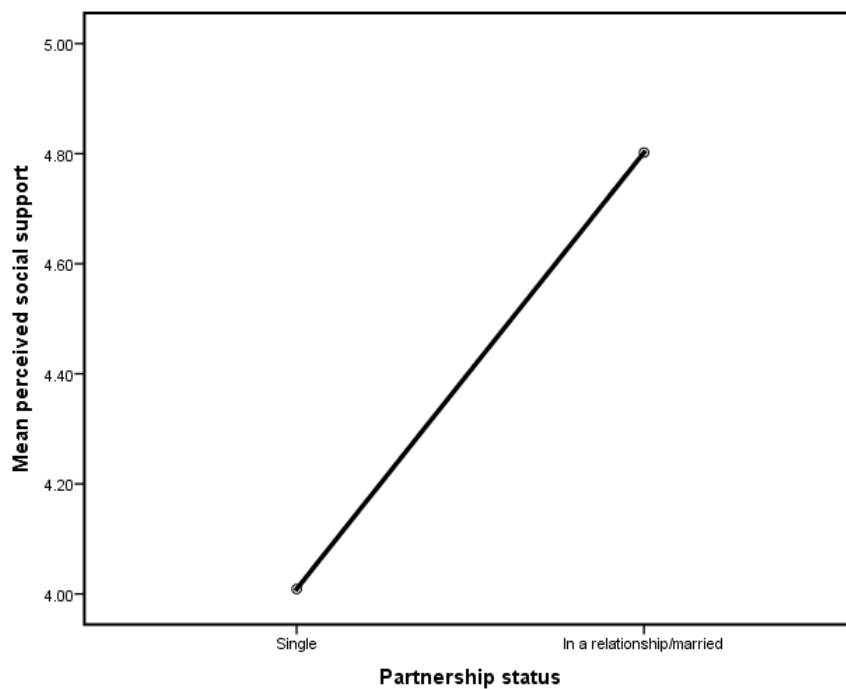
Finally, a statistically significant difference in perceived stress scores was also seen between the three groups $F(2, 190) = 5.32, p = .006$. The effect size indicated a small difference in perceived stress scores ($\eta^2 = .06$). Post-hoc comparisons using the Tukey HSD test indicated that the mean perceived stress score for stay-at-home-mothers ($M = 23.05, SD = 5.95$) was significantly higher ($p = .004$) than part-time working mothers ($M = 19.78, SD = 5.54$) but not significantly higher than full-time working mothers ($p = .40; M = 21.78, SD = 5.58$). There was no statistically significant difference, however, in mean scores between part-time working mothers and full-time working mothers ($p = .16$). See Figure 3 for this result.

3.2.3 One-way analyses of variance for partnership status: Testing hypothesis

3. A further four one-way between-groups ANOVAs were conducted to compare means of

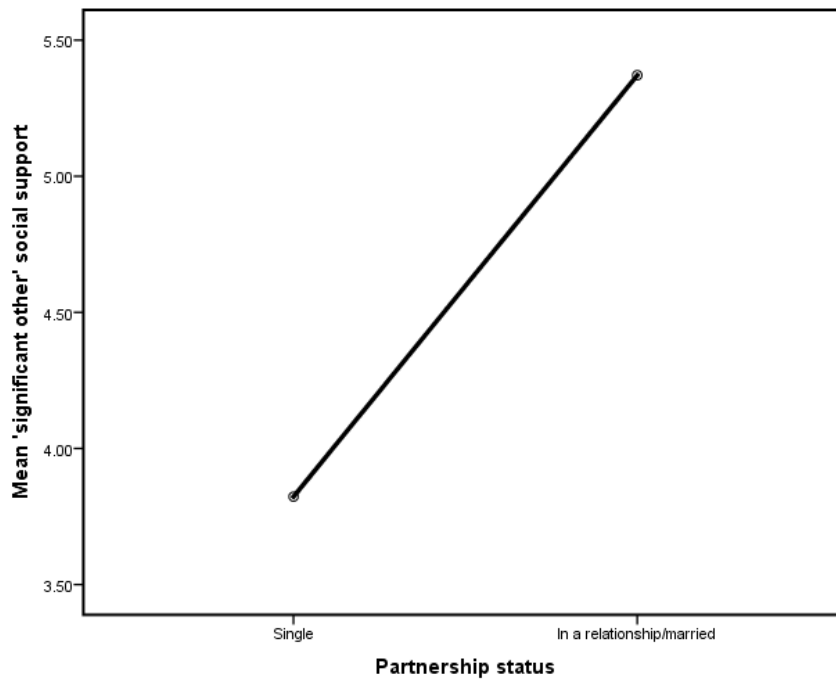
single mothers to partnered/married mothers on all three variables of interest. Conduction of post-hoc comparison tests was not necessary for these analyses as the independent variable consisted of only two levels – single and partnered/married. Figures 4, 5, 6, and 7 display the results of these comparisons.

Figure 4



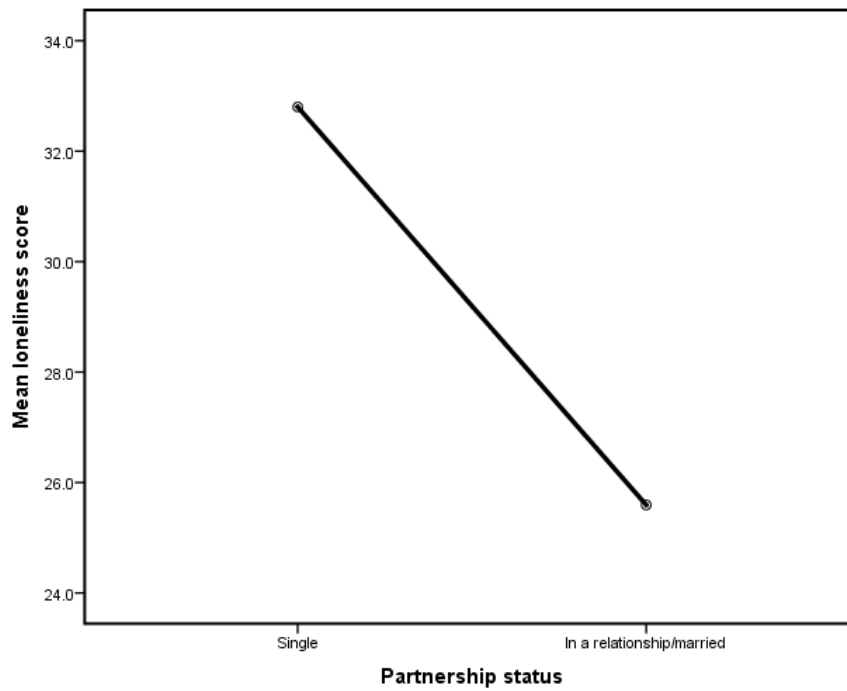
There was a statistically significant difference in scores of perceived social support between single mothers ($M = 4.01$, $SD = 1.53$) and partnered/married mothers ($M = 4.80$, $SD = 1.58$), $F(1, 191) = 11.10$, $p = .001$. The effect size indicated a small difference in overall perceived support scores (eta squared = .06). See Figure 4 for a graph of this result.

Figure 5



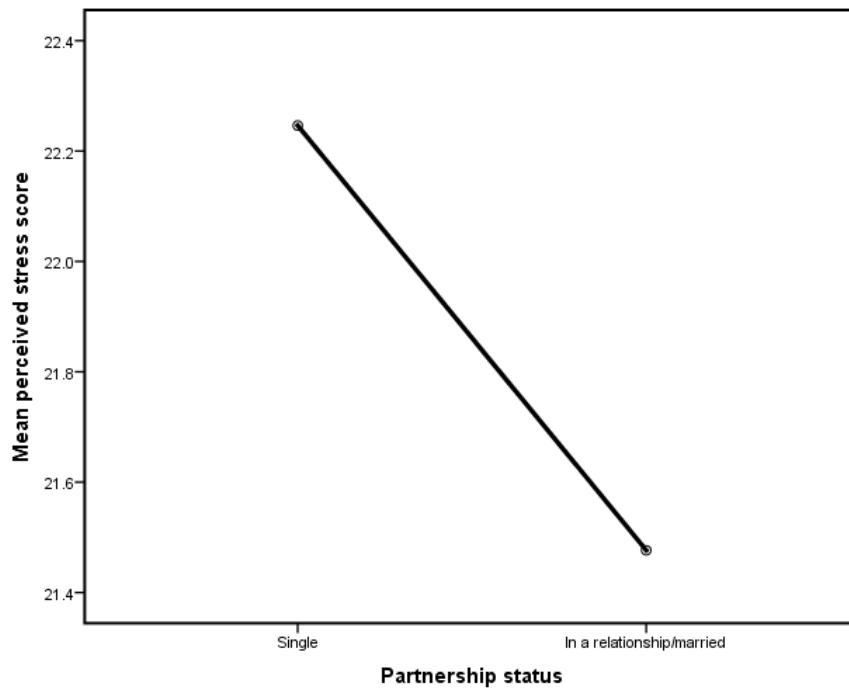
There was also a statistically significant difference in scores on the '*significant other*' support subscale, between single mothers ($M = 3.82$, $SD = 1.80$) and partnered/working mothers ($M = 5.37$, $SD = 1.71$), $F(1, 191) = 33.97$, $p < .001$. The magnitude of the difference was large (eta squared = .18). See Figure 5 for a graph of this result.

Figure 6



A statistically significant difference in loneliness scores was found between single mothers ($M = 32.80$, $SD = 13.54$) and partnered/married mothers ($M = 25.60$, $SD = 16.10$), $F(1, 191) = 9.57$, $p = .002$. The effect size (eta squared = .05) suggested a medium difference in loneliness scores. See Figure 6 for a graph of this result.

Figure 7

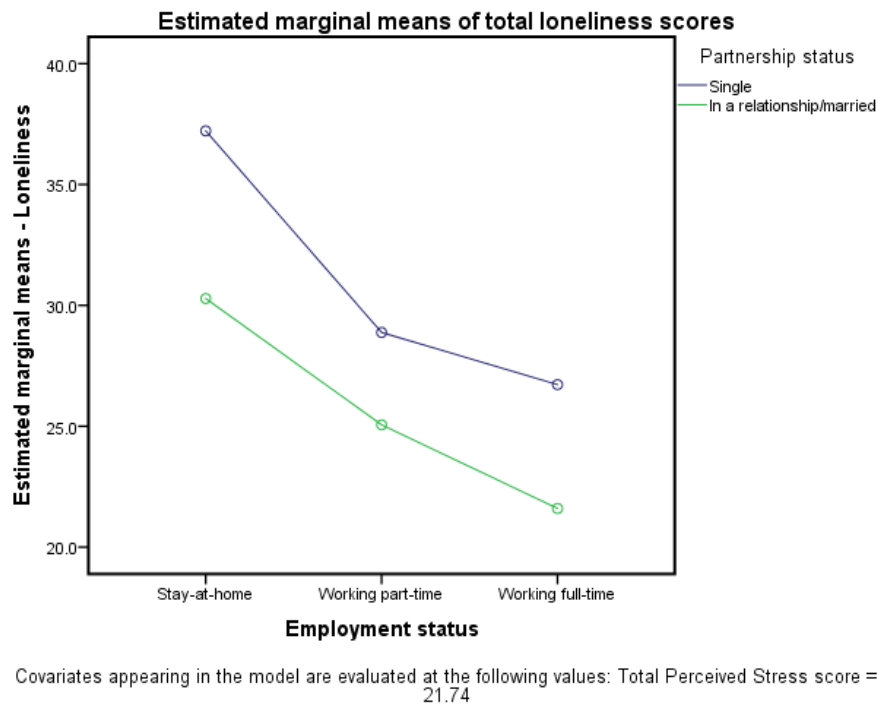


Finally, a non-significant difference in perceived stress scores was found between single mothers ($M = 22.25$, $SD = 5.07$) and partnered/married mothers ($M = 21.48$, $SD = 6.21$), $F(1, 191) = .745$, $p = .39$. The effect size indicated a very small difference in perceived stress scores for the two groups (eta squared = .004). See Figure 7 for a graph of this result.

3.2.4 Two-way analysis of covariance: Testing hypothesis 4. For the final analyses, there were two separate two-way analyses of covariance conducted. Initially, analyses of variance were conducted, essentially not controlling for the effects of covariates. However, as the interaction effects of employment status and partnership status were being measured on (a) loneliness and (b) stress levels, it was deemed necessary to control for the variance shared between loneliness and stress (described earlier), for a more accurate

representation of these effects. Results for the initial ANOVAs, can be found in Appendices F G, for comparison to the findings of the ANCOVAS.

Figure 8

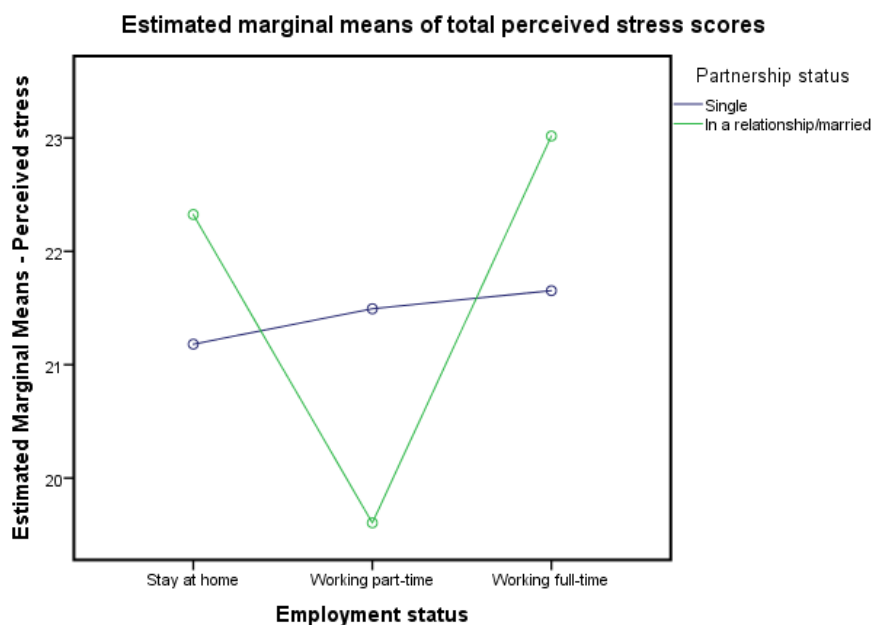


A two-way between groups ANCOVA was conducted to explore for: (1) differences in employment status and partnership status, on levels of loneliness, and (2) to examine if the effect of employment status on loneliness levels depends upon the individual's partnership status. The covariate (control variable) included was total levels of perceived stress. Initial findings showed that the assumption of homogeneity of variance was met ($p = .45$) therefore it was not necessary to adjust the alpha level from .05.

After adjusting for levels of perceived stress, the interaction effect between employment status and partnership status was statistically non-significant, $F(2, 186) = .15, p = .80$. Analysis of the variables' main effects showed significant effects for employment status, which were of a large magnitude ($F(2, 186) = 8.04, p < .001, \eta^2 = .08$). Significant effects were also shown for partnership status, of a very small magnitude ($F(1,$

186) = 6.43, $p = .007$, eta-squared = .01). See These results suggest that single, stay-at-home mothers experience significantly increased levels of loneliness than other subgroups, particularly more those who are married/partnered and attend work full-time. Figure 8 for a graph of the results of this ANCOVA.

Figure 9



Covariates appearing in the model are evaluated at the following values: Total Loneliness score = 28.021

A second two-way between-groups ANCOVA was conducted to explore for: (1) differences in employment status and partnership status on participants' levels of perceived stress, and (2) to examine if the effect of employment on levels of perceived stress depends upon the individuals' partnership. The covariant included was total loneliness score.

The assumption of homogeneity of variance was met when the alpha level was at .05 ($p = .26$). After adjusting for the levels of loneliness, the interaction effect between

employment status and relationship status was not statistically significant, $F(2, 186) = 1.71$, $p = .20$. The main effect for employment was non-statistically significant and of a small magnitude ($F(2, 186) = 1.54$, $p = .22$, $\eta^2 = .02$). The main effect for partnership was also statistically non-significant and this effect was very small ($F(1, 186) = .06$, $p = .81$, $\eta^2 < .001$). These results suggest that working full-time as a married/partnered mother is indicative of slightly increased levels of perceived stress than married/partnered mothers working only on a part-time basis, or mothers who are single and stay at home. Results of this ANCOVA can be seen in Figure 9.

Chapter 4. Discussion

While there is a large amount of existing literature describing the interacting relationships between social support, stress, and loneliness, a gap in this literature was seen for research conducted among mothers, due to motherhood being largely ignored as a construct. The current study was designed aiming to address this gap by investigating the psychosocial and psychological experiences that come with being a mother. Hypotheses within the present study were supported for the most part, and were similar to findings in the existing literature.

4.1 Summary of main results.

Hypothesis 1 was supported, with correlation analyses confirming significant negative associations between (a) social support and perceived stress, and (b), social support and loneliness. Upon further investigation, it was apparent that loneliness and perceived stress levels were also moderately correlated with one another, with the two sharing a fair amount of variance in common.

Although ‘*significant other*’ social support within the MSPSS did not show the *strongest* negative relationship with loneliness and stress scores, all three subscales’ relationships with loneliness and stress were significant, nonetheless. In the current study, ‘*friend*’ support was the subscale most strongly correlated with low loneliness scores. These results can suggest that close sources of support outside the family and intimate relationships could buffer against loneliness for mothers.

Employment status. An interesting finding was that social support scores between stay-at-home mothers, part-time working, and full-time working mothers did not greatly differ, thus Hypothesis 2 was not fully supported. Mean scores of each group showed

moderate levels of social support, as per the scoring suggestions by the MSPSS creators (Zimet et al., 1988). However, loneliness scores were significantly different for stay-at-home mothers in comparison to working mothers, as expected. A great decrease in loneliness scores was seen for those working part-time in comparison to those staying at home, while the difference between part-time and full-time workers was minimal. This result reflects findings studies by D'Ercole (1988) and Telleen et al., (1989) which indicated psychological benefits for mothers who engaged in social roles.

This contradiction – working mothers reporting only marginal differences in average levels of social support from those at home; yet still experiencing significantly fewer feelings of loneliness – could be attributable to two factors. Firstly, mean scores on social support were *moderate* for all three groups (stay-at-home, part-time working and full-time working mothers), as opposed to any group reporting *low* levels of social support and others reporting *high* levels. Thus, social support levels for working mothers may have been relatively similar to those staying at home, *not* directly due to having a place of employment, but, due to those staying at home having potentially more frequent supportive interaction with friends – something which those who spend time at work may experience to a lesser extent. Secondly, the small sample size used in this study could have negatively influenced the power of the statistical analyses, as they are sensitive to small sample sizes. This would suggest that the resulting figures from these advanced analyses could be somewhat inaccurate, and would be more reliable if conducted with a much larger sample size.

Nonetheless, the hypothesis that loneliness would be notably higher for stay-at-home mothers than those who attend a place of work, even on a part-time basis, was supported in this study. This finding could be related back to the concept of having a social role, discussed by Berkman et al. (2000). It seems within this sample, that having an occupation gives the individual a break from their family life, and can indeed protect them from feelings of

loneliness, by essentially adding to their sense of value and belonging outside of the family setting.

Working part-time displayed the lowest levels of perceived stress scores among the three groups, while staying at home involved much higher levels of perceived stress. These findings supported the hypotheses of this study, and suggested a dip in stress levels when employed part-time, before stress increases again, to a level near that of stay-at-home mothers, when in a mother is in full-time employment.

Partnership status. There were visible differences between mothers who were single and those who were partnered or married, thus supporting Hypothesis 3 for the most part. For example, analysis confirmed that ‘*significant other*’ support for married/partnered women was in the *high support* category (based on scoring suggestions by Zimet et al., 1988), while it was only *moderate* for women reporting as single. From this it can be inferred that mothers with a significant other benefit from having a close personal relationship as it counts as an additional form of social support. Also, total perceived social support was higher for women with partners/spouses. Although overall perceived social support would be categorised as *moderate* for both groups due to scores falling in the 3 to 5 margin, mothers with partners/spouses were evidently closer to *high* social support than were single mothers

In terms of loneliness, a rather large difference between single mothers and partnered/married mothers was noticed, with single mothers reporting significantly higher levels of loneliness than those with a partner or spouse. This finding supports the hypothesis that loneliness levels would be lower for mothers who have a close, intimate source of social support. This particular finding is in line with that of Luhmann and Hawkley (2016), which stated that adults without partners were significantly lonelier than those who had partnership support.

However, for perceived stress levels, mothers with partners/spouses did not score much lower than did single mothers, suggesting that partnership alone is not a key component in buffering stress. This was seen in the initial correlations, which showed that '*friend*' and '*family*' support were more related to low levels of perceived stress.

Interaction between partnership status and employment status. Deeper analysis of the data was conducted to better understand the effects of staying at home *and* being single, for example, on a mother's loneliness and stress levels. It had been hypothesised that stay-at-home, single mothers would display the highest levels of loneliness of all four subgroups (stay-at-home single mothers; working single mothers; stay-at-home partnered mothers; working partnered mothers). It can be seen that this hypothesis was supported when covariance was not initially accounted for. Loneliness levels of stay-at-home, single mothers appeared much higher than other groups', but after controlling for stress levels their loneliness was not significantly different to those other groups (see Figure 8). Also, stress levels initially appeared to be highest by a significant margin for stay-at-home mothers – both single and partnered/married. However after later controlling for loneliness levels, it became apparent that actually, full-time working partnered/married mothers had the highest levels of stress. This may be related directly to the concept of *stress*: the feeling that the demands placed are taxing on one's resources. Perhaps mothers working on a full-time basis experience increased stress as their time resource is being consumed as a result of being away from the home so often. Should this be the reason for full-time working mothers' increased stress, then support for the Role Conflict theory (Katz & Kahn, 1978) which is discussed by Woo (2009) is evident in this study.

4.2 Implications of the current findings

The current study was one of the few conducted in recent times examining the psychological and psychosocial experiences during motherhood. The current findings indicate a benefit of having employment in motherhood to engage in a social setting outside of the home, and for having a partner who can provide support. Loneliness levels are lowest for full-time working, married mothers, however their stress levels appear higher than other groups'. It seems the greatest benefit comes from working part-time as a mother – when married/partnered *or* single – as this role may both meet a woman's needs for social integration outside of the home and provide her with sufficient time away from work for her family responsibilities. Thus social support is accessed, but the risk of stress increasing by a demand on the time resource, is unlikely, or is outweighed by the perceived social support. However, further research would be necessary on this topic to confirm these findings.

A potentially more important implication of this research is that these experiences for mothers can influence their parenting, related to the idea put forward by Crnic and Low (cited in Ponnet et al., 2013). Logsdon, Birkimer, Ratterman, Cahill and Cahill (2002) suggest that outcomes for mother *and* child can be associated with mothers' high social support. This means that mothers' experiences can indirectly influence the lives of their children. For this reason, research should be continued in understanding the impact of various sources of social support for women during motherhood, not only to explain motherhood itself but to understand the exact links between a mother's experiences and her methods of parenting.

4.3 Strengths and limitations of the current study

There were a number of strengths and limitations associated with the current study which should be noted.

A major strength was that all three psychological measures employed were highly reliable and commonly used in previous research. This is desirable when designing a study that involves self-report, to ensure that responses from participants can give a valid representation of their feelings of loneliness, perceived stress and perceived social support. On this note, it is important to acknowledge that there is a slight limitation associated with the choice of one of these scales. There have been updates to the UCLA Loneliness Scale (Russell et al., 1978) since 1978 which researchers should consider using when researching loneliness as a variable of interest. The high internal reliability of the original 20-item scale, however, was favoured and therefore this version was chosen.

A second clear strength was that the study contributed to a research area which was in need of more attention and more up-to-date findings. Much of the research on the three constructs of interest – social support, loneliness, and stress – employed many different samples, but only a few investigated mothers. Of the studies which examined mothers, a great deal used samples of mothers of ill or disabled children, e.g., children with cerebral palsy (Glenn, Cunningham, Poole, Reeves & Weindling, 2009), children with spina bifida or insulin-dependent diabetes (Horton & Wallander, 2001), children with ADHD (Lovell, Moss & Wetherell, 2012; Muñoz-Silva, Lago-Urbano, Sanchez-Garcia & Carmona-Márquez, 2017; Yousefia, Far & Abdollahian, 2011), and children with autism spectrum disorders (Boyd, 2002; Bromley, Hare, Davidson & Emerson, 2004; Davis & Carter, 2008; McIntyre & Brown, 2018; Weiss, 2002). It seemed that research examining mothers from the general population was scarce, particularly in recent years, so it could be argued that the contribution of this study, using a general sample of mothers, was necessary.

A third strength would be the inclusion of *partnership* status as opposed to marital status. This approach may be more appropriate for social support research at this point in

time, due to increasing numbers of couples and parents cohabiting outside of marriage (Berrington, Perelli-Harris and Trevena, 2015; Kennedy & Bumpass, 2008).

There were also some limitations which should be mentioned. First and foremost, the study adapted a cross-sectional approach, in that variables were measured only at one point in time, and this design is not favourable in comparison to longitudinal designs, for example. A second point in relation to the design and sample of the current study, the sampling method used was not the most effective, as only a small portion of the overall intended population were approached. These issues ultimately mean that it is difficult to infer whether the current findings are representative of Irish mothers as a general population or not. To address this, replication of the study would be necessary. Nevertheless, the sample gathered for the present study displayed an approximately normal distribution on all variables, which adds to the possibility of results being generalisable. Ideally, a longitudinal design would be highly beneficial and insightful into the experience of motherhood for Irish women.

Furthermore, the self-report of personal emotions and experiences may have been difficult for participants, as they may have been reluctant to consider their emotions fully and/or note them honestly and accurately, or conversely, may have overemphasized the presence of some feelings. Unfortunately, this is an unavoidable issue. Baldwin (1999) states that self-report is necessary for investigating studies in behavioural and medical research, such as those investigating subjective psychological and psychosocial experiences.

Thirdly, mothers' number of children and the age of their youngest child was not accounted for in this study, however these factors may have played a role in parental stress levels (Nelson, Kushlev & Lyubomirsky, 2014), as demands for a caregiver decrease as children grow older (Higgins, Duxbury & Lee, 1994) and an additional source of support is found when children grow older (Fingerman, Pitzer, Lefkowitz, Birditt, & Mroczek, 2008). While the sample in this study would have been mothers to twelve year olds or younger, no

information was known for individuals as to how many children they had, or what their children's exact ages were.

Finally, the current study consisted of a sample that ranged from ages 19 to 49, but did not examine the influence of mothers' age on the variables of interest, nor were mothers requested to provide information regarding the age at which they first became a mother. A study by Garrison, Blalock, Zarski, and Merritt (1997) noted that women who were older at the time of becoming a mother for the first time generally reported less feelings of stress than those who became mothers at younger ages. Another point to add is that younger mothers in the study by Parry et al. (2013) attributed their feelings of loneliness and isolation to their young age, reporting that their friends and peers had not yet entered motherhood and could therefore not connect with them on the same level. From this literature it could be considered that a mother's age is important in relation to her social network, stress and loneliness, and should therefore be examined.

4.4 Recommendations for future research

The first recommendation for future research relates to the limitations of this study. It is likely that a mother's levels of stress and/or loneliness can be influenced by her number of children and by their ages, as well as by her own age when entering motherhood. It is suggested that future studies should incorporate one or more of these aspects and assess how they may impact outcomes for mothers.

Next, it should be mentioned that the current study examined employment status, and therefore information about stay-at-home mothers' hobbies was unavailable. Assessing whether any participants attended other outlets such as mother-baby groups, clubs, or university, for example, may have been beneficial and would be recommended for future research. The previous literature indicates that activities outside of the home and family life

have positive outcomes for mothers, and the current study somewhat supported this. However part-time and full-time work are just two of the potential outlets mothers could have, and others should be examined in future research. Perhaps studies could compare mothers who attend university to those who attend work, and measure the differences in their social support, loneliness and stress levels.

A third recommendation is for researchers to examine single motherhood in Irish sample, as the sample in the current study showed moderately high levels of loneliness among the portion of the sample who were single, whilst participants with partners/spouses displayed much lower levels of loneliness.

The fourth and final recommendation is for longitudinal approaches to be taken in this area. Motherhood is an experience which changes with time, as a result of children growing up and the dynamics of the parent-child relationship changing, so examining these constructs over time would give a great insight into how a mother's social network, support, stress, and loneliness can change with time.

4.5 Conclusion

Motherhood is undeniably a construct that requires ongoing research. The changes a woman faces when entering and throughout motherhood are unparalleled, and for that reason, the impacts of these changes are essential to investigate. This study aimed to do that by measuring Irish mothers' levels of perceived social support along with their potential sources of support (employment and/or partners), and their levels of loneliness and stress, which may have related to those. Hypotheses in this study were generally supported, in particular relating to employment as a source of support decreasing loneliness. Support from a partner or spouse appeared to be significant for Irish mothers, by both boosting social support and decreasing feelings of loneliness and stress, but employment appeared to have similar positive outcomes

for the most part. It can be concluded from this study that some activity such as part-time work can offer mothers various positive outcomes, ranging from a broadened social network to a decrease in parental stress, and this is something which should be widely known.

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Appendices

Appendix A

The UCLA Loneliness Scale.

INSTRUCTIONS: Indicate how often each of the statements below is descriptive of you.

O indicates "I often feel this way"

S indicates "I sometimes feel this way"

R indicates "I rarely feel this way"

N indicates "I never feel this way"

- | | | | | |
|---|---|---|---|---|
| 1. I am unhappy doing so many things alone | O | S | R | N |
| 2. I have nobody to talk to | O | S | R | N |
| 3. I cannot tolerate being so alone | O | S | R | N |
| 4. I lack companionship | O | S | R | N |
| 5. I feel as if nobody really understands me | O | S | R | N |
| 6. I find myself waiting for people to call or write | O | S | R | N |
| 7. There is no one I can turn to | O | S | R | N |
| 8. I am no longer close to anyone | O | S | R | N |
| 9. My interests and ideas are not shared by those around me | O | S | R | N |
| 10. I feel left out | O | S | R | N |
| 11. I feel completely alone | O | S | R | N |
| 12. I am unable to reach out and communicate with those around me | O | S | R | N |
| 13. My social relationships are superficial | O | S | R | N |
| 14. I feel starved for company | O | S | R | N |
| 15. No one really knows me well | O | S | R | N |
| 16. I feel isolated from others | O | S | R | N |
| 17. I am unhappy being so withdrawn | O | S | R | N |
| 18. It is difficult for me to make friends | O | S | R | N |
| 19. I feel shut out and excluded by others | O | S | R | N |
| 20. People are around me but not with me | O | S | R | N |

Scoring:

Make all O's =3, all S's =2, all R's =1, and all N's =0. Keep scoring continuous.

Appendix B

The Perceived Stress Scale.

PERCEIVED STRESS SCALE

**The questions in this scale ask you about your feelings and thoughts during the last month.
In each case, you will be asked to indicate by circling *how often* you felt or thought a
certain way.**

Name _____ Date _____

Age _____ Gender (Circle): **M** **F** Other _____

0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often

- | | | | | | |
|--|---|---|---|---|---|
| 1. In the last month, how often have you been upset because of something that happened unexpectedly? | 0 | 1 | 2 | 3 | 4 |
| 2. In the last month, how often have you felt that you were unable to control the important things in your life? | 0 | 1 | 2 | 3 | 4 |
| 3. In the last month, how often have you felt nervous and "stressed"? | 0 | 1 | 2 | 3 | 4 |
| 4. In the last month, how often have you felt confident about your ability to handle your personal problems? | 0 | 1 | 2 | 3 | 4 |
| 5. In the last month, how often have you felt that things were going your way? | 0 | 1 | 2 | 3 | 4 |
| 6. In the last month, how often have you found that you could not cope with all the things that you had to do? | 0 | 1 | 2 | 3 | 4 |
| 7. In the last month, how often have you been able to control irritations in your life? | 0 | 1 | 2 | 3 | 4 |
| 8. In the last month, how often have you felt that you were on top of things? | 0 | 1 | 2 | 3 | 4 |
| 9. In the last month, how often have you been angered because of things that were outside of your control? | 0 | 1 | 2 | 3 | 4 |
| 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? | 0 | 1 | 2 | 3 | 4 |

Appendix C.

The Multidimensional Scale of Perceived Social Support (MSPSS).

Multidimensional Scale of Perceived Social Support

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

Circle the "1" if you **Very Strongly Disagree**
 Circle the "2" if you **Strongly Disagree**
 Circle the "3" if you **Mildly Disagree**
 Circle the "4" if you are **Neutral**
 Circle the "5" if you **Mildly Agree**
 Circle the "6" if you **Strongly Agree**
 Circle the "7" if you **Very Strongly Agree**

	Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree
1. There is a special person who is around when I am in need.	1	2	3	4	5	6	7
2. There is a special person with whom I can share joys and sorrows.	1	2	3	4	5	6	7
3. My family really tries to help me.	1	2	3	4	5	6	7
4. I get the emotional help & support I need from my family.	1	2	3	4	5	6	7
5. I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7
6. My friends really try to help me.	1	2	3	4	5	6	7
7. I can count on my friends when things go wrong.	1	2	3	4	5	6	7
8. I can talk about my problems with my family.	1	2	3	4	5	6	7
9. I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
10. There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7
11. My family is willing to help me make decisions.	1	2	3	4	5	6	7
12. I can talk about my problems with my friends.	1	2	3	4	5	6	7

Appendix D

Information sheet, consent form and initial background questions.

- INVITATION

You are being invited to take part in a research study conducted by myself, Aisling Byrne, as part of my final year Psychology thesis. I am a student at National College of Ireland. This study is being supervised by Dr. Joanna Power, a lecturer in Psychology at NCI.

- WHAT THE STUDY IS ABOUT

The study is looking at the relationship between mothers' social support and their feelings of loneliness and stress. It aims to discover whether more social support, including having a job and/or a partner, decreases mothers' loneliness levels, and how at the same time their stress levels increase or decrease.

- WHAT WILL HAPPEN

If you decide to take part after reading this page, you will be asked to confirm that you are over the age of 18, and to confirm that you are a mother to one child (or more) who is below the age of 12.

The first 3 questions ask about your age, current relationship status and your current employment status.

You will be given three scales to complete. (1) The UCLA Loneliness Scale, made up of 20 items assessing how often you feel certain things related to loneliness. (2) Perceived Stress Scale (PSS), made up of 10 questions asking how often you have felt various aspects of stress in the past month. (3) Multidimensional Scale of Perceived Social Support (MSPSS), made up of 12 items, which assess how you feel about your social support - from family, friends and from a significant other.

You will be fully debriefed upon completion of this questionnaire.

- TIME COMMITMENT

Participation in this study should require around 15 (no more than 20) minutes to complete. Your participation requires only a once-off completion of this survey. It is recommended that responses are given quickly and not considered too deeply.

- PARTICIPANTS' RIGHTS

You have the right to decide not to begin participation in this study after reading this page. (It will not be known that you have clicked into the link to this page before participation.) Also, you may decide to end your participation in the research study at any time before submitting - without explanation - as the researcher will not know you were completing the survey until you click 'submit' at the end. After clicking submit, unfortunately data will be difficult for the researcher to identify to specific individuals (due to it being anonymous), and it may not be possible for the researcher to remove your data at a later stage.

You have the right to have your questions or worries about the procedures answered at any time, before or after participation. If you are unclear about anything after reading this information sheet, you may contact me via email before deciding to take part. Contact details can be found at the bottom of this sheet.

- BENEFITS AND RISKS

There is no known significant risk for taking part. There is a slight chance that the need to consider your feelings of stress and loneliness might bring to light some issues for you,

causing some distress - however these will not effects would not be prolonged. After participation, you will be given contact details of the Samaritan's helpline if you would like to talk about your feelings.

There is no direct benefit to participants for agreeing to take part in this study, however understanding stress and loneliness in relation to social support is of great importance, and this study would add to that understanding, not only within the field of psychology but also in everyday life.

- ANONYMITY

Your identity will remain anonymous from the beginning of the study. You will never be required to give your name or other major details. All data will be stored in an encrypted file, where all participants are identified only by a participant number.

Data from this study will be analysed and discussed in a research paper for my final thesis. My findings will eventually be presented to my peers at college. This paper may then potentially be published in an academic journal in psychology in the future. However, at no point will individual participants be identifiable.

- FOR FURTHER INFORMATION

I will be glad to answer your questions about this study at any time. You may contact me at x15752329@student.ncirl.ie. You may also contact Dr. Joanna Power, my supervisor, who will also be happy to respond at any time, at Joanna.power@ncirl.ie.

If you want to find out about the final results of this study, you should email me and I will gladly offer you a copy of the final research paper.

*Required

Informed Consent form

By ticking this box, you confirm that you are over 18. You also confirm that you are a mother to one (or more) children below age 12. *

I confirm that I am over 18. I confirm that I am a mother, and have a child below age 12.

No

By ticking this box, you confirm that you have read the information sheet in full and are aware of all risks associated with participation. *

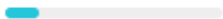
Yes, I have read all the information.

No

After reading this sheet, I consent to participate in this study. *

Yes, I consent to participate.

No

NEXT  Page 1 of 6

*Required

Background questions

What is your age? *

Your answer

What is your current relationship status? *

- Single
- In a relationship or married

What is your current employment status? *

- Working part-time
- Working full-time
- Working from home
- Unemployed
- Currently on maternity (or other) leave

BACK

NEXT

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Appendix E

Debriefing sheet

Your time and responses are greatly appreciated.

Remember to click SUBMIT at the bottom of this page for your responses to be recorded!

This page is to debrief you after completing the questionnaire. As mentioned at the beginning, this study aims to discover how social support networks can mediate feelings of loneliness and stress for mothers, using a measure for all three factors.

Should you feel distressed after considering your personal levels of stress or loneliness, the Samaritans' 24-hour helpline number is given at the bottom of this page.

If you have any questions specific to the study, you can email myself, Aisling Byrne or my research supervisor, Dr. Joanna Power (all details below) and we will be glad to respond.

Also as highlighted at the beginning of the study, participation is completely voluntary and can be withdrawn, even now - because your responses will *not* be received until you click submit.

Should you want to read the final outcomes of this study, which will be available from April 2018, you are welcome to email me to request a copy!

The Samaritan's 24h Helpline: 116 123

Aisling Byrne, the researcher: x15752329@student.ncirl.ie

Dr. Joanna Power, research supervisor: Joanna.power@ncirl.ie

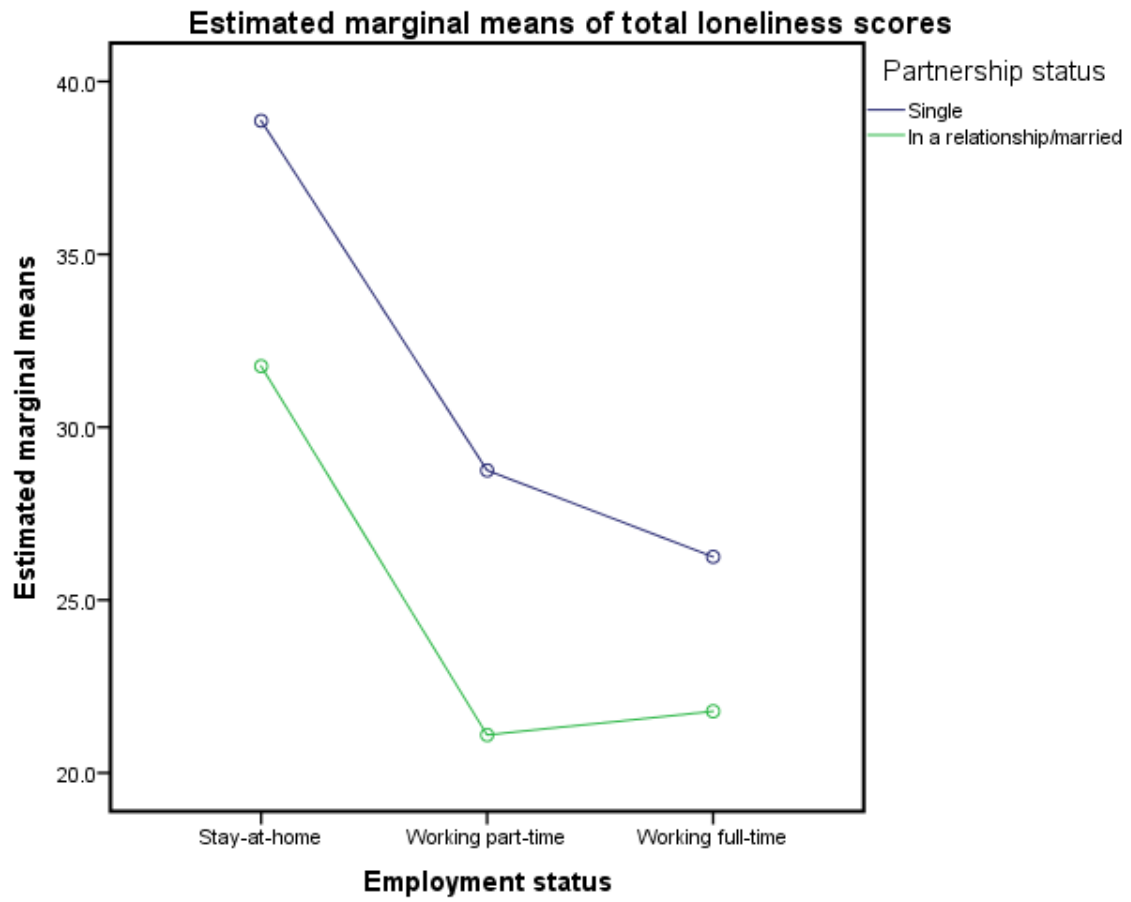
Appendix F

Initial analysis of the interaction effects of employment and partnership status, on loneliness scores.

A two-way between groups ANOVA was conducted to explore for: (1) differences in employment status and partnership status, on levels of loneliness, and (2) to examine if the effect of employment status on loneliness levels depends upon the individual's partnership status. Initial findings showed that the assumption of homogeneity of variance was met ($p = .18$) therefore it was not necessary to adjust the alpha level from .05.

The interaction effect between employment status and partnership status was statistically non-significant, $F(2, 187) = .15, p = .86$. Analysis of the variables' main effects showed significant effects for employment status, which were of a large magnitude ($F(2, 187) = 11.31, p < .001, \eta^2 = .11$). Significant effects were also shown for partnership status, of a small-to-moderate magnitude ($F(1, 187) = 7.51, p = .007, \eta^2 = .04$). See Figure i for a graph of the results of this ANOVA.

Figure i



Appendix G

Initial analysis of the interaction effects of employment and partnership status, on loneliness scores.

A second two-way between-groups ANOVA was conducted to explore for: (1) differences in employment status and partnership status on participants' levels of perceived stress, and (2) to examine if the effect of employment on levels of perceived stress depends upon the individuals' partnership.

The assumption of homogeneity of variance was met when the alpha level was at .05 ($p = .55$). The interaction effect between employment status and relationship status was not statistically significant, $F(2, 187) = 1.64, p = .20$. The main effect for employment was statistically significant and of a small-to-moderate magnitude ($F(2, 187) = 4.57, p = .01, \eta^2 = .05$). The main effect for partnership was not significant and this effect was very small ($F(1, 187) = 1.07, p = .30, \eta^2 = .01$). Results of this ANOVA can be seen in Figure ii.

Figure ii

