Increasing social support for women with postpartum depression using the attribution theory

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Abstract

Mental illness is defined as the state of a person's well-being in his or her capability in enduring a stressor. Postpartum depression is a mood disorder that women endure either shortly before or not long after subsequently giving birth. Postpartum depression negatively impacts not only the affected parent but also child development and the family's well-being. Weiner's attribution model will be assessed to postpartum depression in this study. This study examines the usefulness of two highly looked at variables for increasing social support for women suffering with postpartum depression; affect and social support outcome expectations. This study had two groups: (a) loved one's (N=80) and (b) acquaintance (N=80). In both studies the same analysis was carried out. Cross-sectional studies were assessed to examine whether controllability (onset controllability and offset controllability) for postpartum depression would predict an individual's willingness to provide social support by influence anger and sympathy. In conclusion both studies partially failed to reject the null hypothesis. The violation of homoscedasticity was a limitation in this study. Media coverage was suggested an implication. Perceiving postpartum depression as temporary may help in increasing social support willingness.

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Introduction

Understand mental illness

Mental illness is defined as the state of a person's well-being in his or her capability in enduring a stressor (Corrigan& Kleinlein 2005). Depression, anxiety, eating disorders are examples of different kinds of mental illnesses, these illnesses can disturb with one's emotional and psychological health and social well-being (Fuller et al., 2000). According to the World Health Organisation report (2001), one in four people worldwide will be affect by a mental disorder at some point in their lives. In the U.S alone, the National Institute of Mental Health (2017) states 46.6 million adults over the age of 18 are living with mental illness. Their report showed mental illness to be higher in among women (22.3%) than in men (15.1%). Depression is a mental illness that affects one's interest in associating with the world e.g. family and friends (American Psychiatric Association, 2000). When depression isn't treated in may lead to sever case for example suicide (Jacobs, 1999). Many literatures have investigated why people who suffer from mental illness such as depressed are blamed for their illness (Wood et al., 2014). Some believe people suffering from depression can simply make themselves feel better (Crisp et al., 2000) as some believe it's just a character weakness they have (Jorm at al., 1997). According to Corrigan et al., 1999 research psychiatric disorders such as depression and schizophrenia are regarded as more blameworthy than physical health conditions such as cancer and heart disease.

Postpartum depression

Postpartum depression is a mood disorder that women endure either shortly before or not long after subsequently giving birth (Robertson, 2014). According to postpartum depression and the baby blues et al., 2019 a very small percentage of women enter straight into postpartum depression, for most women it usually starts off with the "baby blues".

The “baby blues” is a short term used which examples a dip in moods caused shortly before or after given birth. Baby blues is caused by change in hormones with a combination of fatigue, stress and isolation. Women with baby blues have frequently have mood swings (Stanford’s children’s health). One minute they may be happy being a mother and doing a great job and the next minute they’re crying thinking they’re not living up to the task of being a “good mother”. Manjunath and Giriyappa Rajanna (2011) conducted a study on postpartum blues also known as baby blues, on pregnant women who are due to deliver within two weeks. Their study demonstrated a strong correlation between demographics (such as gender of the offspring, marital relationship, emotional-physical support) and sociocultural variables and the postpartum depression. In this study baby blues was seen higher in mothers from low-income homes. A reason Manjunath and & Giriyappa Venkatesh (2011) gave for this was the additional new member to a family who are already financially struggling can cause a lot of stress. This study is evident that unhealthy martial relationship is another risk factor of postpartum blues. Lack of emotional and physical support is a problem which leads to postpartum depression (Field, 2017). When baby blues isn’t treated it leads to postpartum depression (Morris-Rush et al., 2003). Patel et al. (2012) found that postpartum depression affects 10% to 15% of mothers globally. Postpartum depression encounter symptoms such as sadness, anxiety, irritability, fear of not being a good mother, hopelessness, excessive crying, worthlessness and severe mood swings. The symptoms and feelings they may endure may be similar to those of baby blues however it is more intense.

Effects of Postpartum depression

Postpartum depression doesn’t just occur with the first child born but can also be diagnose with the children after. When a women’s ability to do her everyday activity is affected by her feelings after given birth, she may have postpartum depression. Postpartum

depression negatively impacts not only the affected parent but also child development and the family's well-being (Ramchandani et al., 2011). Many studies have recurrently shown that postpartum depression conveys long-term negative consequences for children, including increased psychopathology, behaviour problems, and affects learning and intelligence (Dix & Yan, 2014; Feldman et al., 2009; Rohanachandra et al., 2018; Goodman et al., 2001). Depressed mothers show less attention and aware of their children needs. The longitudinal study of Kochanska et al. (1987) examined the difference between depressed mothers and non-depressed mothers and found depressed mothers are less likely to set boundaries when dealing with their child and when they do they don't stick to them. Children raised by depressed mothers are seen to be more vulnerable and may have suppressing and expressing problems which are results of lower interactions from their mothers (Field et al., 1996). Children raised with depressed mothers were also more likely to participate in less physical play and less likely to express their creative play compared to the control children (Murray et al., 1999). Many studies have shown the effects of postpartum depression does not just impact the infant stage but can also go on to have an impact on the toddler and adolescent stages of life (Weobong et al., 2014). These outcomes of the child's behaviour were all associated with postpartum depression. Studies have also shown the negative association between postpartum depression and a child's cognitive development. Gender difference have been examined in many studies (Hay et al., 2001; Sharp et al., 1995). The Sharp et al. (1995) study indicates boys to be more sensitive to their mother's illness compared to girls. In their study the boys showed a decrease on standardised tests of intellectual attainment. According to Closa-Monasterolo et al. (2017) study they found children reared with depressed mothers showed higher risk of disorders like ADHD.

Demographics profile

Postpartum depression is one of the most common medical problems women face today (Wisner et al., 2009). There is not a specific group of women that can be impacted by this illness (Robertson, 2014), however depression has been more commonly been caused by poor social support, martial conflicts, and poverty (Yonkers & Chantilis, 1995). Poverty is seen as a predictor of depression, resulting higher in lower socioeconomic groups than higher groups (Kessler & Neighbors, 1986). Many researchers have conducted studies that contradict Kessler & Neighbors' (1986) research on socioeconomic groups being associated with depression (O'Hara, 1986). The hypothesis of Geronimus et al., (2006) suggests that increasing exposure to social stressors and social discrimination may incline low class groups to experience poor mental health and thus exposure may account for high rates of maternal depression in women in Mexican descent. The birth of a child varies for every woman. It can be joyful and stressful for any parent (Mulsow et al., 2002). Women with low socioeconomic status are at greater risk of developing postpartum depression (Beeber and Shandor Miles, 2003; Rich-Edwards et al., 2006) With this being said, according to Goyal et al. (2010) women with low incomes are less likely to have access to mental health service and are less likely to seek professional help if they're having symptoms of depression (Kimerling & Baumrind, 2005).

Research on social support have shown the importance of support and the effect it has on marriages. Cohen et al. (2000) have shown the positive effect of support. Its association shows to lower levels of depression however on the other side lack of support has shown to result in physical and psychological problems (Thits, 1995). Studies have shown women are more at risk of postpartum depression during pregnancy is they lack spousal support (Beck & Gable, 2001). This may be in result of feeling isolated.

Attribution theory

A report was made which brought light to stigma being a barrier to individuals who suffer from mental illness looking for professional help (U.S. department of health and human services 1999). This led to more research investigating stigma and to what effect it has on individuals suffering from mental illnesses. Mental disorder like depression and anxiety for example and their associated stigma can lead to social isolation and decrease one's opportunity in employment for example (Shrive et al., 2006). Stigma can always worsen the illness and may lead to physical illnesses (Chapman et al., 2005). Attributions are the reasons we give for our own and other behaviours. Attribution theory looks to try and explain how and why we make these casual attributions (Birnberg et al., 1977). According to Fritz Heider (1959) people are like amateur scientists. Humans try and understand why others act the way they do and won't stop trying to understand till they reach a reasonable explanation or cause. Many researchers have used the attribution theory in many different types of sectors. For example, research has shown obesity stigma has been dominated by attribution perspective (Crandall, 1994). Black et al. (2014) conducted a study on the effect of effort and weight controllability on obese individuals. In their study participants had to read about obese people whose body weight was either controllable or uncontrollable, and if they did or did not put in effort in eating healthy. Their results showed participates where less disgust and accepting to obese people who shown to put in effort. They were more accepting of their lifestyle. From her results she found efforts to lose weight have a huge implication, on how the participants viewed obese targets compared to controllability. The belief that fat people are responsible for their own weight as they don't have the motivation or the will power to lose it, is the attribution perspective in effect (van Leeuwen et al., 2015). Ling et al. (2010) study have shown in Hong Kong the relationship of attribution perspective towards children with autism. 123 participants had to take their modified version of the attribution questionnaire after reading a hypothetical vignette on autism. The results from their study showed anger and

sympathy were depended on whether it was perceived controllable or not which effected if they'd help. Ling et al. (2010) concluded, people's responses to children with autism were more related to their emotional reactions. All these studies and many more show how attribution plays a big part in peoples' judgments. Unfortunately, there are many negative attitudes towards women with postpartum depression (Corrigan et al., 2016). Many people believe women choose to put themselves in postpartum depression, putting the blame on them. Women with postpartum depression get stigmatised for not acting how a "normal mother" would and are being stigmatised for being a depressed mother (Goodman, 2009). What is a "normal mother"? This is the belief that mothers are supposed to be full of life and positive from giving birth, shame women going through postpartum depression (Riecher-Rossler & Hofecker Fallahpour., 2003).

Effects of attribution in postpartum depression

According to the mental health organisation, social stigma and discrimination are huge obstacle for individuals suffering and make it harder to recovery. Yousuf et al. (2018) conducted a cross cultural study of 5,00 participants and found stigma effected individual's self-esteem and to form and maintain relationships which has an associated with an increase in developing depression and anxiety. With there being such negative views toward women going through postpartum depression, it makes it really difficult for there to be any social support (Crisp et al., 2000). People who suffer from mental illness like depression are hesitant to seek professional help. The research of McNair et al. (2002) found stigma to be being a huge barrier for people suffering from mental health to seek professional help.

Perceived controllability in Mental Illness

Many studies on perceived controllability have shown perceiving mental illness as uncontrollable is associated more with sympathy and less anger, which according to Corrigan (2000), leads to more people wanting to help. Law et al. (2009) investigated and found

behaviours attributed controllable lead to negative responses example: anger. Behaviours attributed as uncontrollable lead to positive responses (i.e., sympathy). According Weiner (1995) theory, he believes behaviour goes through a cognitive emotional process. First persons make attributions about the cause and controllability of a person's illness that lead to inferences about responsibility. These inferences lead to emotional reactions such as anger or pity that either makes them want to help or have a distant behaviour to the person. According to Weiner theory and many other articles on attribution, people try and figure out who's responsible for their mental health. This leads people to make attribution about the cause and the controllability of the mental illness. Ruybal and Siegel (2017) and Corrigan and Colleagues (1999) both conducted at study on postpartum depression. Their finding correlated. Corrigan and Colleagues (1999) found their participants were likely to help a person with mental illness if the respondent perceived mental illness was not controlled by the individual. The Barrowclough et al. (2005) study also had the same findings to Corrigan and Colleagues (1999), as they indicated that when family member is seen to be responsible for schizophrenia, it leads to those around them being more distant towards them.

Affects toward mental illness

The most current research that looked at effects on mental illness is Weiner (1880a, 1980b) theory which centres around increase helping behaviour. He proposed an attribution model which emphasized on the correlation of attribution emotion and help giving. According to Weiner there's two main emotion individuals encounter after they've met an event. After they've understood the circumstances emotion and action follows up. Anger and sympathy are two main emotions and focused more upon. Weiner suggest when attribution follows up with anger it leads to a decrease in helping behaviour; when attribution is associated with sympathy it is increasing helping behaviour (Wiener, 1980)

Rationale

The study will investigate the use of the attribution theory on postpartum depression. Many studies have shown guided by Weiner's attribution model, people have strong views on women with postpartum depression. The Ruybal and Siegel (2017) study found perceiving postpartum depression as a temporary illness was associated with less anger and more sympathy. It was also positively associated with the willingness to provide social support. This study will replicate Ruybal and Siegal's (2017) research study on depression using the attribution theory. This study will see if the attribution can be applied to women with postpartum depression and if the same results may be replicated on a different population. This study will investigate how emotion effect stigma. Previous study has shown sympathy and anger to have a correlation with mental health. Studies have shown sympathy to be associated with low levels of stigma and willingness to provide support toward individuals with mental illness. This study will investigate if there is a difference in stigma between a close family members and acquaintance with postpartum depression.

Research aims and objectives

This study aims to see to if individuals are willing to provide support to women with postpartum depression and if it's associated with believing if the illness is controllable or not. Along with investigating how anger or sympathy might affect individual's stigma regarding women with postpartum depression. Finally, to access if there's going to be same results between two groups, 1. Loved one's or 2. Acquaintance.

Hypothesis

1. (a) Increase in sympathy is associated with increase social support willingness. (b) Increase in anger is associated with decrease social support willingness.
2. Increase social support outcome expectancies (SSOEs) is associated with increase social support willingness.

3. (a) Decreased perceived onset controllability is associated with higher sympathy. (b) Decreased perceived offset controllability is associated with higher sympathy.

4. (a) Increased perceived onset controllability is associated with increased anger. (b)Increased perceived offset controllability is associated with increased anger.

Methods

Participants

The current studies sample for loved one's consisted of 49 females and 31 males, totalling 80 participants. The studies sample for acquaintance consisted of 40 females and 40 males also totalling to 80 participants. Participants were gathered through a non-probability sampling technique called convenience-snowball sampling. Participants were reached out through social media such as Facebook, Twitter and Snapchat. On these platforms' individuals were not only able to have direct link to the questionnaires but were also able to share the questionnaire to other social media platforms. Before the questionnaire began on the information sheet an inclusion criterion was presented. Participant has to be over the age of 18 and give their consent to use their shared views. Participants names and email addresses were not collected for participants anonymity.

Design

Both studies were quantitative studies. Cross sectional within subject design studies. The variables for both studies are sympathy, anger, willingness to provide social support, SSOEs, onset controllability and offset controllability. The dependant variables for both studies are willingness to provide social support.

Measures

For this study data was collected through google forms, which is an online survey where one can create surveys and collect data. Before anyone could start the questionnaire, an information sheet was first presented. This just simply stated the purpose of the study and the participants rights. The questionnaire had seven sections (1) demographic, (2) sympathy, (3) fear, (4) anger, (5) support, (6) social support expectations, (7) personal belief.

Several different scales were used to measure the participants feelings towards either their loved ones or an acquaintance with postpartum depression. scales included measures of

affects, willingness to provide social support, social support expectations, fear, and attribution, onset and offset controllability.

The affect scale was the first scale the participants had to take. The affects being measured were sympathy and anger. The same scale was used to measure both of these affects. This scale was taken from past research Weiner et al.,, 1988. Many other researchers have used this scale to examine participants feelings towards control. Before answering any questions, participants were giving a vignette in both studies, for close family member/acquaintance they were told "Please imagine you have just spent an extensive amount of time with (loved one's/acquaintance) who had postpartum depression. To what extent will you feel each of the following emotions?" they responded on a 7-likert scale, 1 (not at all) to 7 (very much).

Sympathy They answered the following (a) tenderness (b) kindness, (c) understanding (d) warmth and (e) endearment.

Anger (a) annoyance (b) bothered (Chavira et al., 2000), (c) anger, (d) frustration and (e) impatience

The second scale was to measure SSOEs (Ruybal & Siegel, 2017) on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Participants had to answer the following (a) ‘‘There is something I can do to help the depressed person,’’ (b) ‘‘There is something I can do to shorten the length of time they are depressed,’’ (c) ‘‘There is something I can do to help with the depression recovery,’’ (d) ‘‘My help would be needed if the person was going to get better,’’ and (e) ‘‘The more help I can give, the less depressed they will become.’’

The third scale was to measure social support willingness. This scale was to measure participants willingness to offer aide to a depressed one. They reported on a 7-point Likert-

type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Respondents were instructed, ‘‘Please indicate the extent to which you would be unwilling or willing to provide help in the specific way listed.’’ All items had the same stem: ‘‘I would be willing to help this person if . . .’’: (a) ‘‘. . . they wanted to talk about their private feelings,’’ (b) ‘‘. . . they wanted someone to point out their good qualities,’’ (c) ‘‘. . . they needed someone to tell them they were loved by others,’’ (d) ‘‘. . . they needed advice,’’ (e) ‘‘. . . they felt lonely,’’ and (f) ‘‘. . . they needed someone to make them feel better.’’

Two measure controllability it was divided in its two components: onset controllability and offset controllability (Brickman at al., 1982). Perceived Onset Controllability. Participants read a list of potential causes of depression and indicated which might be responsible for depression in their loved one or acquaintance, on a 7-point Likert-type scale ranging from 1 (not at all responsible) to 7 (completely responsible): (a) lack of religious faith (Martin et al., 2000), (b) desire for attention, (c) lack of willpower (Crandall, 1994), (d) lack of character, and (e) lack of motivation.

Perceived Offset Controllability. Participants read a list of potential causes and indicated the extent to which each cause might be responsible for their loved one or acquaintance remaining depressed, on a 7-point Likert-type scale ranging from 1 (not at all responsible) to 7 (completely responsible): (a) lack of religious faith, (b) desire of attention (c) lack of willpower, (d) lack of character, (e) lack of motivation, (f) lack of moral conviction (Riedel-Heller,Matschinger et al., 2005), (g) chemical imbalance, (h) genetic factors, (i) environmental stressors and (j) lack of family support.

Procedure

Participants were recruited via receiving a link through snapchat, Facebook and email. This link was a direct link to the questionnaire uploaded on google doc form where every individual had the choice to participant or not. All participants were firstly presented with an information sheet. The information sheet spoke on the nature of the study. It had the objectives and the aims of the research. It also presented the approximated time to complete the questionnaire which was 5-10 minutes. It was also clearly displayed only participant from the age of 18-54 could take part.

Participants were reassured of their confidentiality while part taking this research. They were informed no names or email addresses were going to be collected. They were also informed on their right to withdraw any data before submitting the questionnaire. This was a very important piece of information every participate was aware of. On the information sheet the researchers and the supervisor details were available. Along with more professional aid for example the Samaritans. When participants voluntarily clicked “yes” to participant in the questionnaire they were directly forwarded to the questionnaires. See appendix (B)

Once the participants completed the following scales: sympathy, anger, fear, social support willingness, social support outcome expectations (SSOEs), onset controllability and offset controllability, a debriefing form presented. This had information on the researchers next step following collecting the data along with their details if they had any enquires about the study. See appendix (E) for debriefing form.

Data was collected from the 26th of November to the 24th of January. Then data was entered into IBM SPSS Statistics 24.0 for statistical analyses.

Results

Descriptive statistics

Reliability statistics for the scales for loved one's. The scale for Sympathy contained 5 items, displayed high reliability by achieving a Cronbach's Alpha of (a = .90). The Anger scale contained 5 items to which achieved a Cronbach alpha of (a = 0.96). The Fear scale contained 4 items to which achieved a Cronbach alpha of (a = 0.93). The social support scale contained 6 items and has a good consistency with a Cronbach alpha coefficient reported as .98. The SSOEs scale contained 5 items to which achieved a Cronbach alpha of (a=0.94). The Onset controllability scale contained 5 items to which achieved a Cronbach alpha of (a=0.82). The Offset controllability scale contained 10 items to which achieved a Cronbach alpha of (a=0.88).

Table 1.

Reliability statistics for variables for loved one's

Variable	No. of items	Cronbach's Alpha (a)
Sympathy	5	.90
Anger	5	.97
Fear	4	.93
Social support	6	.98
SSOEs	5	.94
Onset controllability	5	.82

Reliability statistics for the scales for acquaintance. The scale for sympathy contained 5 items, displayed high reliability by achieving a Cronbach's Alpha of (a =0.96). The Anger scale contained 5 items to which achieved a Cronbach alpha of (a=0.98). The Fear scale contained 4 items to which achieved a Cronbach alpha of (a=0.73). The social support scale contained 6 items and has a good consistency with a Cronbach alpha coefficient reported as .99. The SSOEs scale contained 5 items to which achieved a Cronbach alpha of (a=0.94). The Onset controllability scale contained 5 items to which achieved a Cronbach alpha of (a=0.94). The Offset controllability scale contained 10 items to which achieved a Cronbach alpha of (a=0.84).

Table 2

Reliability statistics for variables for acquaintance

Variable	No. of items	Cronbach's Alpha (a)
Sympathy	5	.96
Anger	5	.98
Fear	4	.73
Social support	6	.99
SSOEs	5	.94
Onset controllability	5	.94
Offset controllability	10	.84

Frequency for loved one's. In table 3 the frequency statistics of the categorical variable and its findings are displayed for loved one's. In this study there were only one categorical variable: gender.

Table 3

Frequencies for the current sample on demographic variable (N = 67)

Variable	Frequency	Valid Percentage
Gender		
Male	28	41.8
Female	39	58.2

Frequencies for acquaintance. In table 4 the frequency statistics of the categorical variable and its findings are displayed for acquaintance. In this study there were only one categorical variable: gender.

Table 4

Frequencies for the current sample on demographic variable (N = 80)

Variable	Frequency	Valid Percentage
Gender		
Male	40	50.0
Female	40	50.0

Descriptive statistics for loved one's. The descriptive statistics for the continuous variables are displayed below in table 5, these variables were gathered from the existing study for close family members. In this study normality was analysed by looking at the histogram and the Q-

Q plots. When first analysed the Q-Q plot for each variable there was extreme outliers, and this was removed. Also, because a straight line was presented in all of the histograms, this concluded to be normal distributed.

Table 5
Descriptive statistics and reliability of all continuous variables, for loved one's

	Mean (95% confidence Intervals	Std. Error mean	Median	SD	Range
Age	22.07 (21.19 – 22.96)	.44	21	3.64	18-45
Pity	30.25 (29.15 – 31.35)	.54	31	4.49	18-35
Anger	11.68 (9.93 – 13.43)	.87	10	7.18	5-31
Fear	5.94 (5.09 -6.78)	.42	4	3.45	4-21
Social support	38.79 (37.62 – 39.96)	.58	42	4.80	26-42
SSOEs	25.89 (24.41– 27.37)	.74	26	6.06	9-35
Onset controllability	9.80 (7.82-10.35)	.63	7	5.17	5-24
Offset controllability	20.34(18.17-22.51)	1.08	19	8.90	10-40

Descriptive statistics for acquaintance. The descriptive statistics for the continuous variables are displayed below in table 6 that were gathered from the existing study for acquaintance. In this study normality was analysed by looking at the histogram and the Q-Q plots. When

analysing the Q-Q plot for each variable there was no extreme outliers. Also, because a straight line was presented in all of the histograms, this concluded to be normal distributed.

Table 6

Descriptive statistics and reliability of all continuous variables, for acquaintance

	Mean (95% confidence Intervals)	Std. Error mean	Median	SD	Range
Age	26.90 (24.80-29)	1.05	25	9.42	18-51
Pity	21.68 (19.70-23.66)	.99	23	8.88	8-35
Anger	18.52 (15.98-21.06)	1.23	17	11.43	5-35
Fear	8.78 (7.74-9.82)	.52	8	4.67	4-24
Social support	29.72 (27.00-32.44)	1.36	36	12.22	7-42
SSOEs	18.11 (16.20-20.02)	.95	20	8.57	5-35
Onset controllability	18.70 (16.42-20.97)	1.14	20	10.20	5-35
Offset controllability	31.68 (29.20-34.17)	1.24	32	11.16	13-53

Inferential statistics

Analysis for Loved Ones

Hypothesis 1: A) Increased sympathy is associated with increased social support in loved one's. B) Increased anger is associated with decreased social support in loved one's. The relationship between sympathy and social support was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a strong, positive correlation between the two variables, $r = .77$, $n = 67$, $p < .000$. Two of these variables had approximately 24% of variance. These results indicated the more sympathy one had the more willing they were to provide social support.

The relationship between Anger and social support was investigated using Pearson product-moment correlation coefficient. There was a strong, negative correlation between the two variables, $r = -.69$, $n = 67$, $p < .000$, this was statically significant. Results indicated those who showed more anger were less likely to provide social support to those with postpartum depression.

Table 7

Correlations between all continuous variables for loved ones

Variables	1	2	3	4	5
1. Sympathy	1				
2. Anger	-.69***	1			
3. Social support	.77***	-.59***	1		
4. SSOEs	.57***	-.47***	.60***	1	
5. Onset controllability	-.65***	.59***	-.70***	-.56***	1
6. Offset controllability	-.67***	.55***	-.69***	-.52***	.88***

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

Hypothesis 2: Higher helping outcome expectancies are associated with increased social support in loved one's. The relationship between SSOE and social support showed a negative, strong correlation between the two variables (r= -.47, n = 67, p < .000) that was statistically significant. Results indicated helping outcome expectancies are associated with increase in social support

Hypothesis 3: (a) Increased perceived onset controllability is associated with and predicts increased sympathy in loved one's. (b)Increased perceived offset controllability is associated with and predicts increased sympathy in loved one's. The relationship between onset and sympathy showed a negative, strong correlation between the two variables (r= -.65, n = 67, p < .000) that was statistically significant. The relationship between offset and sympathy showed a negative, strong correlation between the two variables (r= -.67, n = 67, p < .000) that was statistically significant. Multiple regression analysis was preformed to

examine if onset and offset controllability would predict sympathy. In the model, one control measure was statistically significant, with offset controllability recording higher beta value (beta = -.42, p < .05) than onset controllability (beta = -.28, p = .155).

Table 8

Multiple regression model predicting sympathy for loved one's

	R^2	β	*B*	*SE*	CI 95% (B)
Model	.46***				
Offset controllability		-.42*	-.21	.10	.01 / .09
Onset controllability		-.28	-.24	.17	.09 / .21

Note. N = 67; Statistical significance: *p < .05; **p < .01; ***p < .001

Hypothesis 4: a) Increased perceived onset controllability is associated with and predicts increased anger in loved one's. (b)Increased perceived offset controllability is associated with and predicts increased anger in loved one's. The relationship between onset and anger showed a positive, strong correlation between the two variables (r= .59, n = 67, p < .000) that was statistically significant. The relationship between offset and anger showed a positive, strong correlation between the two variables (r= .55, n = 67, p < .000) that was statistically significant. Multiple regression analysis was preformed to examine if onset and offset controllability would predict anger. In the model, one control measure was statistically significant, with onset controllability recording higher beta value (beta = .44, p < .05) than offset controllability (beta = .16, p = .447).

Table 9

Multiple regression model predicting anger for loved one's

	R^2	β	*B*	*SE*	CI 95% (B)
Model	.35***				
Offset controllability		.16	.13	.17	.01 / .09
Onset controllability		.44*	.61	.30	.09 / .21

Note. N = 67; Statistical significance: *p < .05; **p < .01; ***p < .001

Analysis for Acquaintance

Hypothesis 1: A) Increased sympathy is associated with increased social support in acquaintance. B) Increased anger is associated with decreased social support in acquaintance. The relationship between sympathy and social support was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a strong, positive correlation between the two variables, r = .77, n = 80, p <.000. These results indicated the more sympathy one had the more willing they were to provide social support.

The relationship between Anger and social support was investigated using Pearson product-moment correlation coefficient. There was a strong, negative correlation between the two variables, r = -.86, n = 80, p <.000, this was statically significant. Results indicated those who showed more anger were less likely to provide social support to those with postpartum depression.

Table 7

Correlations between all continuous variables for Acquaintance

Variables	1	2	3	4	5
1. Sympathy	1				
2. Anger	-.86***	1			
3. Social support	.77***	-.86***	1		
4. SSOEs	.82***	-.82***	.78***	1	
5. Onset controllability	-.71***	.84***	-.76***	-.72***	1
6. Offset controllability	-.70***	.84***	-.73***	-.69***	.95***

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

Hypothesis 2: Higher helping outcome expectancies are associated with increased social support in acquaintance.

The relationship between SSOE and social support showed a negative, strong correlation between the two variables (r= -.82, n = 80, p < .000) that was statistically significant. Results indicated helping outcome expectancies are associated with increase in social support.

Hypothesis 3: (a) Increased perceived onset controllability is associated with increased sympathy in acquaintance. (b)Increased perceived offset controllability is associated with increased sympathy in acquaintance. The relationship between onset and sympathy showed a negative, strong correlation between the two variables (r= -.65, n = 67, p < .000) that was statistically significant. The relationship between offset and sympathy showed a negative, strong correlation between the two variables (r= -.67, n = 67, p < .000) that was statistically significant. Multiple regression analysis was preformed to examine if

onset and offset controllability would predict sympathy. In the model, no control measure was statistically significant, with onset controllability recording higher beta value (beta = -.43, p = .084) than offset controllability (beta = -.29, p = .244).

Table 12

Multiple regression model predicting sympathy for acquaintance.

	R^2	β	*B*	*SE*
Model	.51***			
Offset controllability		-.29	-.23	.20
Onset controllability		-.43	-.38	.22

Note. N = 80; Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$

Hypothesis 4: a) Increased perceived onset controllability is associated with increased anger in acquaintance. (b)Increased perceived offset controllability is associated with increased anger in acquaintance. The relationship between onset and anger showed a positive, strong correlation between the two variables (r= .84, n = 80, p < .000) that was statistically significant. The relationship between offset and anger showed a positive, strong correlation between the two variables (r= .84, n = 80, p < .000) that was statistically significant. Multiple regression analysis was preformed to examine if onset and offset controllability would predict anger. In the model, one control measure was statistically significant, with offset controllability recording higher beta value (beta = .51, p < .01) than onset controllability (beta = .35, p = .06).

Table 13

Multiple regression model predicting anger for acquaintance.

	R^2	β	B	SE
Model	.73***			
Offset controllability		.51**	.52	.19
Onset controllability		.35	.40	.21

Note. N = 80; Statistical significance: *p < .05; **p < .01; ***p < .001

Hierarchical multiple regression was used to examine whether anger, sympathy and / or SSOEs were significant predictors of social support willingness, controlling for age and gender in the loved one's group. Preliminary analyses were conducted to ensure no violation of assumptions of normality, linearity, multicollinearity. However, homoscedastic was violated, this is seen below in the scatterplot (Appendix D). Gender and age were entered at step, explaining 17% of the variance in the willingness to provide social support. After anger and sympathy was entered in step 2, the total variance explained was 63%, F (4, 62) = 25.94, p < .001. In the final step SSOEs was added in. The total variance was explained as 67%, F (5, 61) = 24.35, p < .001. This measure explained an additional 4% of variance in social support, after controlling anger, R squared change = .04, F change (1,61) = 7.35, p < .001. In the final model, two control measure was statistically significant, with sympathy recording higher beta value (beta = .52, p < .001) than SSOEs (beta = .250, p = 0.009).

Table 8 Hierarchical multiple regression for loved one's

Hierarchical linear regression analysis for social support for Study 1 (N = 67)

	R	R^2	*f*	***B***	**B**	**SE**	t
Step 1	.414	.171**	6.62				
Gender				-.301	-2.91**	1.126	-2.58
Age				-.226	-.298	.154	-1.94
Step 2		.626***	25.94				
Gender				-.135	-1.30	.793	-1.64
Age				-.090	-.119	.107	-1.12
Sympathy				.641	.684***	.117	5.86
Anger				-.102	-.068	.072	-.94
Step 3		.666**	7.35				
Gender				-.170	-1.64*	.766	-2.14
Age				-.068	-.089	.102	-.87
Sympathy				.522	.558***	.121	4.63
Anger				-.061	-.041	.069	-.56
SSOEs				250	.198**	.073	2.71

Note. N = 67; Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$

Hierarchical multiple regression was used to examine whether anger, sympathy or SSOEs were significant predictors of social support willingness, controlling for age and gender in the acquaintance group. Preliminary analyses were conducted to ensure no violation of assumptions of normality, linearity, multicollinearity and homoscedasticity. Gender and age were entered at step, explaining 26.7% of the variance in the willingness to provide social support. After anger and sympathy was entered in step 2, the total variance

explained was 77%, F (4, 75) = 62.89, p < .001. In the final step SSOE was added in. The total variance was explained as 78%, F (5, 74) = 51.08, p < .001. This measure explained an additional 5% of variance in social support, after controlling anger, R squared change = .05, F change (1,74) = 1.74, p < .001. In the final model, one control measure was statistically significant, with anger recording lower beta value (beta = -.65, p = .000) than sympathy (beta = .09, p = .457) and SSOE (beta = .138, p = .203)

Table 9 Hierarchical multiple regression for Acquaintance

Hierarchical linear regression analysis for social support for Study 2 (N = 80)

	R	R^2	f	β	**B**	**SE**	t
Step 1	.517	.267***	14.02				
Gender				-.514	-12.49***	2.45	-5.10
Age				-.010	-.012	.131	-.09
Step 2		.770***	62.89				
Gender				-.054	-1.30	1.64	-.789
Age				-.128	-.166*	.076	-2.17
Sympathy				.161	.221	.154	1.43
Anger				-.695	-.743***	.126	-5.89
Step 3		.775	51.08				
Gender				-.044	-1.059	1.65	-.641
Age				-.113	-.147	.077	-1,90
Sympathy				.093	.127	.170	.75

Anger	-.646	-.691***	.132	-5.22
SSOEs	.138	.197	.154	1.28

Note. N = 80; Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$

Discussion

The current study was conducted to increase support for women with postpartum depression. This study investigated two groups; loved ones and acquaintance. The findings of the hypothesis in this study were supported by past literature. This study replicated Ruybal and Siegel (2017) research study of the attribution theory on depression. This study aimed to see if Ruybal and Siegel (2017) research could be replicated on women with postpartum depression with a few changes, for example on a different population. The finding that were found were partially significant. However, the results didn't differ in loved one's and acquaintances.

The **first hypothesis** says, (a) "Increased sympathy is associated with increased social support willingness" and (b) "Increased anger is associated with decrease social support willingness". Firstly, a Pearson correlation analysis was conducted on the total samples and willingness to provide social support. A strong positive correlation was found in both groups between sympathy and social support willingness, and a negative strong correlation between anger and social support willing willingness. The current studies results were aligned with Weiner 's et al., 1980 attribution-emotion-action model. Anger and sympathy are two variables which have been widely examined in framework of mental illness. The model results anger in reducing helping behaviour, then when attribution is associated with sympathy, this increasing helping behaviour. The current study failed to reject the null hypothesis as there were statistically significant. The current study found both sympathy and anger to be statistically significant predictors for social support willingness. As the current study predict increase in sympathy was association with increase in social support in both groups; loved ones and acquaintance and increase in anger was associated with decease in social support. These results are aligned with Ruybal and Siegel (2017). The results of the

correlation are accord with the finding of Corrigan and colleagues (1999). Their study found individuals to be more likely to help out

The **second hypothesis** says, “Increase in social support outcome expectancies is associated with social support”. This studies also failed to reject the null hypothesis as a strong negative correlation was fount between the two variables. The second hypothesis was analysis in the regression model and found to also be a predict to social support. This is similar to the findings of Ruybal and Siegel (2017). In this current study there was an association between social support willingness and SSOEs.

The **third hypothesis** says, (a) Increased perceived onset controllability is associated with increased sympathy. (b)Increased perceived offset controllability is associated with increased sympathy. Onset controllability resulted to be a significant predict for sympathy only for loved one’s. For acquaintance both offset and onset were statically not significant. Ruybal and Siegel (2017) found no significant between offset and onset controllability related to sympathy.

The **fourth hypothesis** says, (a) Increased perceived onset controllability is associated with increased anger. (b)Increased perceived offset controllability is associated with increased anger. Onset controllability was found significant for anger in loved one’s and there was a significant relation between onset controllability and anger in acquaintance ($r = .73$). When postpartum in more associated to be caused by lack of willpower and lack of motivation the anger is felt towards the women. This results support Fincham et al. (2000) relation between anger and offset controllability.

As mentioned above stigmatization has a huge impact on people suffering with mental illness (Yousuf et al. 2018). According to Corrigan et al. (2016) the general population could aide in increase public stigma against mental illness. When they don’t speak about it the

silently promote public stigma. The study agrees with the significance of reducing stigma which other researchers have looked at (Barney, Griffiths, Jorm, & Christensen, 2006; Siegel et al., 2012). Evans-Lacko et al. (2014) in one of recent campaigns looking to help peoples views against mental illness. The current study was found the two groups had the same results. All the hypothesis was partially met for both groups. This is a good this for society. We understand no matter who the person is to us as a society we want to help individuals with postpartum depression.

The current study had a number of limitations. Firstly, the assumption of homoscedastic was violated. This meant the results (e.g. p value) may not actually be the figures presented if the assumption was not violated. The second limitation was the sample size. At first the researcher collected 80 participants for both groups. Compared to other studies done on mental illness and attribution 80 participants for both groups are a small sample. Also, when the researchers were doing their analysis for loved one's outliers were present. This resulted in a decrease in data N=67. Additionally, another aspect to take into consideration is the study had a total of 40 questions which required attention, so there could be a possibility some may have lost attention and randomly selected their answer.
Some strengths of this study it's its contribution to research looking to increase social support to people with mental illness. There are no recent researchers that have looked at the affects and postpartum depression and attribution theory. Pervious research has just looked at depression as a whole (Ruybal & Siegel, 2017) but not specifically postpartum depression. With research concerning mental illness and affects limited, this study was a great contribution.

Recommendation for future research

This study offers guidance for future campaigns in aid to help reduce any stigma surrounding PPD. The first intervention that may help reduce anger may be for doctors to arrange check up with women who recently gave birth and their loved ones. In these check-ups the doctor expresses postpartum depression being temporary. This message coming from a higher authority (doctors) will have a big implication. Also, there should be more ads on the postpartum depression being temporary. This will not only shed a good light on postpartum depression increasing help but also will reduce self-stigma.

For future research who may want to replicate this study, a recommendation would be to do further analysis. To analysis where SSOEs moderate the relation between affect and social support. Also, for further studies to gain a more accurate results on if sympathy, anger and/or SSOEs predict social support willingness to watch out for the assumptions as the researcher in this study violated the homoscedastic assumption as mentioned above.

Conclusion

This study replicated Seigal et al. (2012) research which was guided by weiner's attribution model. There were two groups; loved one's and acquaintance. The overall aim of the research was to understand ways of increasing social support for women that have postpartum depression by evaluating the two variables: (a) the affect, felt toward the women and (b) the belief that offering help will lead to beneficial outcome (SSOEs). Both of these variables; affect and SSOEs were strongly associated with respondent's willingness to provide social support to the women with postpartum depression in both groups; loved ones and acquaintance. It was then examined if controllability predicted these affects. These hypotheses were partially supported. Interventions such as doctor check-up and media campaigns were suggested to increase social support and reduce anger.

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Appendices A

Pity/Sympathy

To what extent will you feel each of the following emotions?" they responded on a 7-likert scale, 1 (not at all) to 7 (very much).

a. tenderness
b. kindness
c. understanding
d. warmth
e. endearment.

Anger

a. annoyance
b. bothered
c. anger,
d. frustration
e. impatience

SSOEs

a. ‘‘There is something I can do to help the depressed person,’’
b. ‘‘There is something I can do to shorten the length of time they are depressed,’’
c. ‘‘There is something I can do to help with the depression recovery,’’
d. ‘‘My help would be needed if the person was going to get better,’’
e. ‘‘The more help I can give, the less depressed they will become.’’

Social support willingness

‘‘Please indicate the extent to which you would be unwilling or willing to provide help in the specific way listed.’’ All items had the same stem: ‘I would be willing to help this person if . . .’

a. ‘‘. . . they wanted to talk about their private feelings,’’
b. ‘‘. . . they wanted someone to point out their good qualities,’’
c. ‘‘. . . they needed someone to tell them they were loved by others,’’

d. ‘‘. . . they needed advice,’’
e. ‘‘. . . they felt lonely,’’
f. ‘‘. . . they needed someone to make them feel better.’’

Two measure controllability it was divided in it’s two components: onset controllability and offset controllability).

Perceived Onset Controllability. responsible for, on a 7-point Likert-type scale ranging from 1 (not at all responsible) to 7 (completely responsible):

a. lack of religious faith
b. desire for attention
c. lack of willpower
d. lack of character
e. lack of motivation

Perceived Offset Controllability. remaining depressed, on a 7-point Likert-type scale ranging from 1 (not at all responsible) to 7 (completely responsible):

a. lack of religious faith
b. lack of attention
c. lack of willpower
d. lack of character
e. lack of motivation
f. lack of moral conviction
g. chemical imbalance
h. genetic factors
i. environmental stressors
j. lack of family support

Appendix B

Information sheet and consent form

I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Ask questions if anything you read is not clear or if you would like more information. Take time to decide whether to take part.

WHO I AM AND WHAT THIS STUDY IS ABOUT?

Hi my name is Cecile Kizenga. I'm currently a psychology student up in the national college of Ireland. I'm in my final year, which is a thesis based. Which what bring me to you today. I'm currently conducting a study for my final year project, which talks about the how people view women suffering with postpartum depression.

For those who are unaware in what postpartum depression is? Postpartum depression is a mental illness some women endure after giving birth. It includes symptoms such as not being able to care for the new-born, loss of appetite, the belief of not being a good mother and many more. This research will examine if people would be willing to help women going through this illness or not, if they sympathize with them or show more anger and lastly if they believe it to be the women's fault in why she is depressed.

WHAT WILL TAKING PART INVOLVE?

The question will be based on anger, sympathy, helping, fear and personal responsible beliefs. This survey will not take longer than 10 minutes. The research will be looking for anyone from the age of 18-84

DO YOU HAVE TO TAKE PART?

Participation in this research is completely voluntary and you the right to withdraw any time before submitting your response. However, please note that after data is submitted you are unable to withdraw data as it will be unidentifiable.

WHAT ARE THE POSSIBLE RISKS AND BENEFITS OF TAKING PART?

The possible risk of this survey is some participates may know someone who in reality has had or currently going through this mental illness and this may cause distress. An email will be linked below to if any participation would like any help or someone to talk to.

WILL TAKING PART BE CONFIDENTIAL?

The research will be collected the participant age and gender. To ensure their protection their personal information such as name, living area, job title and income will not be needed. We'll be vigilant with personal data for this cross-sectional research and making sure it is secure and only to be used for this research.

WHAT WILL HAPPEN TO THE RESULTS OF THE STUDY?

When results are collected from the study, they'll will be used in my thesis. Once I've submitted my thesis, they will them be used during presentation. These results will not be used outside this research.

WHO SHOULD YOU CONTACT FOR FURTHER INFORMATION?

Researcher: cecile kizenga

email: graceruth800@gmail.com

Supervisor: David Mothersill

email: 44avid.mothersill@ncirl.ie

FOR ANY PROFESSIONAL ASSITANT; www.aware.ie

Email: supportmail@aware.ie : expect a response within 24 hours

Hotline: 1800 80 48 48 – MONDAY TO SUNDAY: 10AM -10PM

Thanking you in advance for your participation.

Appendix C

Thank you for your participation in this experiment. A friendly reminder, once submitted, you will not be able to withdraw your responses. This is an opportunity for you now if you feel the need to withdraw or change review your answers. The goal of this study was to determine the effect of attribution (perceived controllability) determine emotional responses such as 1) sympathy or 2) anger will impact the willingness to help or not. There are two types of groups being examine 1. Close family and 2. Acquaintance. Everyone who participated was randomly allocated to either 1 of these two groups. Previous study conducted on this topic have found participants in the Acquaintance group stigma more the women with postpartum depression than the Close family group.

Your participation is not only greatly appreciated by the researcher involved, but the data collected could possibly aid bringing more awareness to women suffering with this illness. In any case of distress, there is professional help listed below.

If you have any questions about this study, please contact us.

Researcher

Cecile Kizenga

Graceruth800@gmail.com

Supervisor

David Mothersill

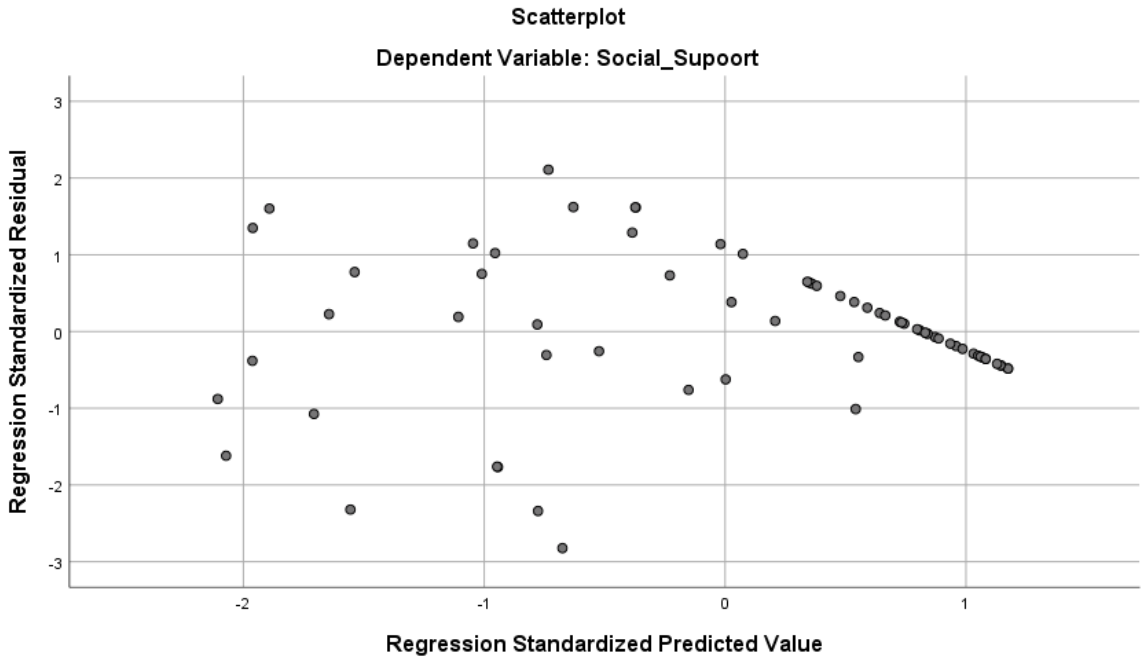
david.mothersill@ncirl.ie

In case of distress

Samaritans

016710071

Appendix D


Scatterplot
Dependent Variable: Social_Supoort
Regression Standardized Residual
Regression Standardized Predicted Value
3
2
1
0
-1
-2
-3
-2
-1
0
1