Are "Superwomen" without social support at risk for postpartum depression and anxiety?

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Abstract

Postpartum depression affects as many as 18.6% of women, and postpartum anxiety affects between 10.4% and 16.2% of women. Previous research has found social support and perfectionism to be implicated in many psychological issues, postpartum depression and anxiety included. This study examined social support as a protective factor against postpartum depressive and anxiety symptoms and perfectionism as a risk factor; associations between subscales of social support and postpartum depressive and anxiety symptoms; social support as a moderator between the relationship of perfectionism and postpartum depressive and anxiety symptoms. A total of 596 postpartum participants were included. Participants completed measures on postpartum depression, anxiety, social support, and perfectionism. Multivariate regressions revealed perfectionism was not significantly associated with depressive or anxiety symptoms, Wilks' $\lambda = .99$, $F(2, 592) = 1.98$, $p = .14$. Social support was a significant protective factor against depressive and anxiety symptoms, Wilks' $\lambda = .86$, $F(2, 592) = 46.89$, $p < .05$, partial $\eta^2 = .14$. Further analyses revealed that all social support subscales were significantly associated with depressive and anxiety symptoms, with support from friends having the largest effect size, Wilks' $\lambda = .94$, $F(2, 591) = 19.14$, $p < .001$, partial $\eta^2 = .06$. High levels of social support significantly moderated the relationship between perfectionism and depressive symptoms, and average and high levels of social support significantly moderated the relationship between perfectionism and anxiety symptoms. These results emphasize the importance of social support for postpartum women's mental health. Implications for healthcare and policies are discussed.

with anxiety and depression in pregnant women. While Maia et al. (2012) found significant positive correlations between self-oriented and socially prescribed perfectionism and depression in pregnancy, there were no significant correlations in the postpartum period for self-oriented perfectionism. The authors proposed that the insignificant findings may be because postpartum women were not experiencing work-related stressors (Maia et al., 2012).

Perfectionism may influence women in many areas of their life, such as work, marriage/relationship, appearance, and motherhood. A "Superwoman" is a woman that attempts perfection in multiple roles-- being both "feminine" when necessary and "masculine" when necessary. For example, a Superwoman would have to be feminine and nurturing toward her family but masculine and strong within the workforce. Murnen, Smolak, and Levine (1994) proposed that Superwomen have a greater risk of eating disorders. Indeed, Hart and Kenny (1997) found that aspects of the Superwoman are positively associated with eating disorder symptoms. Superwomen may also have an increased risk of other psychopathology, such as postpartum depression and anxiety, though there is no research with this specific construct. The current study aims to fill this gap in the literature.

Effects of PostpartumDepression and Anxiety

Postpartum depression and anxiety affect negatively the creation and maintenance of the mother-baby bond, the romantic relationship with a significant other, and, simply, the psychological well-being of the mother. Many women may not get the help they need because of the stigma and guilt surrounding their thoughts and feelings, especially since society often views pregnancy and birth as joyful and renewing (Pearlstein, Howard, Salisbury, & Zlotnick, 2009).

Mothers with postpartum depression and anxiety tend to be less responsive to their babies, leading to the babies becoming more withdrawn and the possibility of developing an

insecure attachment (Milgrom, Westley, & Gemmill, 2004; Stein et al., 2012; Teti, Gelfand, Messinger, & Isabella, 1995). Children of mothers with postpartum depression and anxiety are more likely to have lower intelligence scores, be described as having a learning disability, and develop depression and anxiety themselves, as well as other psychopathology (Hay et al., 2001; Weissman et al., 1987).

The readjustment of life and a romantic relationship may also be difficult for many couples, regardless of whether it is the couple's first child or not (Belsky, Spanier, & Rovine, 1983; Goldberg & Sayer, 2006). For instance, Belsky et al. (1983) found a decrease in positive interactions and perceived marital cohesion in parents from third trimester to three months postpartum. Moreover, postpartum depression and anxiety may cause higher parental stress and have an adverse effect on memory (Kizilbash, Vanderploeg, & Curtiss, 2002; Teti et al., 1995). Relatedly, Escribà-Agüir and Artazcoz (2010) found postpartum depression in one partner was a significant predictor of postpartum depression in the other. Furthermore, 6% of all deaths of postpartum women are by suicide (Grigoriadis, 2017).

Rationale and Hypotheses

The present study focused on the effects of social support and adherence to the Superwoman schema in women during the postpartum period. Primarily, the study addressed the extent to which social support, using a detailed measure, is a protective factor against postpartum depression and anxiety, and the extent to which perfectionism is a risk factor. Moreover, this study examined the specific subtypes of perceived social support, seeking to understand what relationships may be most associated with postpartum depression and anxiety. In addition, the study examined perfectionism, investigating the relationship between attempting to excel in

multiple roles and postpartum depression and anxiety. Therefore, the hypotheses for this study were:

1. Social support will be a protective factor against postpartum depressive and

link on Qualtrics. Participants read and signed informed consent and completed measures on

perfectionism (SWS), social support (MSPSS), postpartum depressive symptoms (EPDS), and

anxiety symptoms (GAD-7), taking approximately 20 minutes. Interested participants were

entered into a raffle to win one of 40 $20 Amazon gift cards.

Participants

A total of 1034 individuals accessed the survey, and a total of 596 participants were

retained for analyses because they completed the survey and were eligible. Of the individuals

who interacted with the survey, 140 (13.54%) did not complete the consent form and 16 (1.55%)

completed the consent but were ineligible. Additional participants were removed due to

incompletion of all measures ($n = 241$, 23.31%), incompletion of demographics ($n = 8$, .77%),

incompletion of youngest child's date of birth ($n = 22$, 2.13%), and youngest child older than one

year ($n = 12$, 1.16%).

The mean age of participants was 30.89 years ($SD = 4.50$). The mean age of the youngest

child was 169.44 days old ($SD = 92.76$). Table 1 shows number and percentage of participants

per group of gender, race, relationship status, income level, employment status, education level,

and depression and/or anxiety diagnosis.

Measures

Demographic Questionnaire The demographic questionnaire included information

about the participants' age, gender, race/ethnicity, educational background, marital status,

income level, pregnancy/children, and mental health.

Edinburgh Postnatal Depression Scale (EPDS) The EPDS (Cox, Holden, & Sagovsky,

1987) is the most common scale used to measure postpartum depression in women. It is a 10-

item measure with responses on a four-point Likert scale about symptoms within the past seven

days. Examples of statements on the EPDS are: "I have been able to laugh and see the funny side of things" (reverse-coded), "I have been so unhappy that I have had difficulty sleeping," "I have felt sad or miserable," and "The thought of harm

specificity, with a sensitivity of 76% and 51.5% with a cut-off score of 10 and sensitivity of

61.3% and specificity of 72.7% with a cut-off score of 13 (Simpson, Glazer, Michalski, Steiner,

& Frey, 2014).

Multidimensional Scale of Perceived Social Support (MSPSS). The MSPSS (Zimet,

Dahlem, Zimet, & Farley, 1988) is a 12-item scale that measures perceived social support with

three subscales—family, friends, and significant other. Examples of statements on the MSPSS

are: "I get the emotional help and support I need from my family" (Family), "My friends really

try to help me (Friends), and "There is a special person with whom I can share my joys and

sorrows" (Significant other). It is rated on a seven-point Likert scale (1 = very strongly disagree,

7 = very strongly agree). The highest possible score is 84. Zimet et al. (1988) demonstrated the

scale's internal consistency (Cronbach's . = .88) and test-retest reliability as well as factorial and

construct validity. Strong internal reliability and validity was maintained when testing with

pregnant women, specifically, however few studies have been conducted on the specifics of

validation for peripartum or postpartum women (Zimet, Powell, Farley, Werkman, & Berkoff,

1990). In the current study, this measure had strong internal consistency (Cronbach's . = .95).

Superwoman Scale (SWS). The Superwoman Scale (Murnen, Smolak, & Levine, 1994)

is a 27-item instrument that measures adherence to the Superwoman schema, or, in other words,

the inclination to achieve perfection within multiple roles, such as being a mother, a professional,

and an attractive woman - some traditionally feminine and some traditionally masculine.

Participants are instructed to rate each item by how well they feel it characterizes them. It is rated

on a six-point Likert scale from "extremely well" to "not at all." Examples of the items include:

"While it is hard for most people to do, I think I can have a strong family life and very successful

career," "I don't leave the house until I look my best," and "I would never consider a career that

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doesn't automatically command respect from strangers." Based on Murnen et al. (1994), the

Superwoman Scale demonstrated strong internal consistency (Cronbach's . = .89, as analyzed by

Everett & Martino, 2014), and strong validity for research in gendered and stress issues. In this

study, the Cronbach's . was .74, indicating moderate internal consistency.

Results

The mean of the EPDS was 8.53 (SD = 5.68) with 16.6% within range of probable minor

depression and 22.8% within range for probable

depressive symptoms and social support predicting postpartum anxiety symptoms were statistically significant, $F(1, 539) = 92.56$, $p < .001$, $\beta = -.14$, $t(1, 593) = -9.62$, $p < .001$ and $F(1,593) = 46.13$, $p < .001$, $\beta = -.10$, $t(1, 593) = -6.79$, $p < .001$, respectively. The model for perfectionism predicting depressive and anxiety symptoms was not significant, Wilks' $\Lambda = .99$, $F(2, 592) = 1.98$, $p = .14$. After adjusting alpha levels to .025 to account for the additional analyses, univariate analyses were not significant for postpartum depressive or anxiety symptoms, $F(1, 593) = 2.75$, $p = .10$ and $F(1, 593) = 3.93$, $p = .05$, respectively.

Hypothesis 2

A general linear model multivariate regression analysis was conducted with the three social support subscale (MSPSS) as predictors, entered into SPSS as covariates, and postpartum depressive symptoms (EPDS) and anxiety symptoms (GAD-7) as outcomes, entered into SPSS as dependent variables. All social support subscales were statistically significant predictors of depressive and anxiety symptoms: Significant Other: Wilks' $\Lambda = .97$, $F(2, 591) = 9.91$, $p < .001$, partial $\eta^2 = .03$; Family: Wilks' $\Lambda = .95$, $F(2, 591) = 14.55$, $p < .001$, partial $\eta^2 = .05$; Friends: Wilks' $\Lambda = .94$, $F(2, 591) = 19.14$, $p < .001$, partial $\eta^2 = .06$. Univariate analyses for Significant Other support predicting postpartum depressive and anxiety symptoms were both significant, $F(1, 592) = 8.82$, $p < .01$, partial $\eta^2 = .02$, $\beta = .19$, $t(1, 592) = 2.97$, $p < .01$ and $F(1, 592) = 19.41$, $p < .001$, partial $\eta^2 = .03$, $\beta = .27$, $t(1, 592) = 4.41$, $p < .001$, respectively. Similarly, univariate analyses for Family support were significant for both postpartum depressive and anxiety symptoms, $F(1, 592) = 28.43$, $p < .001$, partial $\eta^2 = .05$, $\beta = -.31$, $t(1, 592) = -5.33$, $p < .001$, and $F(1, 592) = 21.66$, $p < .001$, partial $\eta^2 = .04$, $\beta = -.27$, $t(1, 592) = -4.65$, $p < .001$, respectively. Univariate analyses for Friend support were significant for postpartum depressive and anxiety symptoms as well: $F(1, 592) = 33.85$, $p < .001$, partial $\eta^2 = .05$, $\beta = -.27$, $t(1, 592) = -5.82$, $p <$

.001 and F (1, 592) = 34.07, $p < .001$, partial $²$ = .05, B= -.26, t (1,592) = -5.84, $p < .001$,

respectively.

Hypothesis 3

To test the hypothesis that social support moderates the relationship between

perfectionism and postpartum depressive symptoms, PROCESS macro (Hayes, 2017) was

utilized. The overall model was statistically significant, R^2 = .14, F (3, 592) = 33.44, $p < .001$.

The interaction was also significant, B= .0028, t (592) = 2.53, p = .012 with $ΔR^2$ = .0092, F (1,

592) = 6.38, p = .01. Johnson-Neyman tests were conducted revealing that the significance

occurs at the social support value of 67.42 with 56.38% of values remaining above. These results

partially support the hypothesis that social support would act as a moderator between adherence

to the Superwoman schema and postpartum depressive symptoms, as the relationship is only

statistically significant at high levels of social support (see Figure 1).

Hypothesis 4

PROCESS macro was also utilized to test the hypothesized moderation of social support

on the relationship of perfectionism and postpartum anxiety. The overall model was statistically

significant, R^2 = .082, F(3, 592) = 17.58, $p < .001$. The interaction between social support and

perfectionism was also statistically significant, B= .0023, t (592) = 2.13, p = .03 with $ΔR^2$ =

.0071, F (1, 592) = 4.55, p = .03. The conditional effects revealed that the moderation was

statistically significant among average and high levels of social support, partially supporting the

hypothesis of social support moderating the relationship between perfectionism and anxiety

symptoms. As social support increases, perfectionism has less of an effect on anxiety symptoms,

therefore acting as a buffer. At low levels of social support, there were no significant differences

in postpartum anxiety between women with different levels of perfectionism. Figure 2 illustrates this relationship.

Discussion

One of the main purposes of this study was to determine whether social support is a protective factor against postpartum depressive and anxiety symptoms and whether perfectionism, or adhering to the Superwoman schema, is a risk factor. The results indicate that perfectionism is not a risk factor for postpartum depressive or anxiety symptoms. However, social support was a significant protective factor against postpartum depressive and anxiety symptoms. Support from friends, family, and significant other were also all individually related to lower levels of depressive and anxiety symptoms.

While perfectionism was not a significant predictor of postpartum depressive or anxiety symptoms, the insignificance may be due to the difference between adaptive and maladaptive perfectionism. As first defined by Hamachek (1978), and later reanalyzed by Periasamy and Ashby (2002), individuals with high standards who experience satisfaction within their efforts demonstrate adaptive perfectionism. On the other hand, individuals with high standards who perceive the results and efforts as unacceptable and unsatisfactory engage in maladaptive perfectionism. As Schalkwijk, Someren, and Wassing (2019) pointed out, the self-evaluation of whether one met or failed to meet their high standards is critical to determine if the type of perfectionism. While the Superwoman Scale used in this study does capture many dimensions, it

report, the lower their depressive or anxiety symptoms. Additionally, while all three types of

social support were negatively associated with psychopathology, support from friends had the

largest effect size, thus having the greatest importance. Although research suggested that support

from a significant other is the most important in protection from a depressive disorder (Stapleton

et al., 2012; Stewart, Umar, Tomenson, & Creed, 2014), support from friends has also been

found as a significant protective factor (Nasser & Overholser, 2005). Further, support from

friends may be interpreted as a special connection between women, as friends, in commiserating

and mutual understanding. It is also possible that the results from this analysis are skewed, as the

majority of participants indicated high significant other support, leading to low variance and

inability to fully explore the effects of low social support from a significant other. Regardless,

support from a significant other, family, and friends were all positively associated with lower

postpartum depressive and anxiety symptoms. Thus, postpartum mothers would greatly benefit

from supportive personal relationships, as well as social policies that encourage more social

support for mothers.

Social support has been previously implicated as a moderator and mediator between

health, depressive and anxiety symptoms, and illness-related absences from employment (Eib et

al., 2018; Viseu et al., 2018). Correspondingly, this study aimed to examine social support as a

moderator between perfectionism and postpartum depressive symptoms, and perfectionism and

and occupational function, and if they are not meeting their expectations of having the perfect family life and career (Murnen et al., 1994).

Other specific means of support may be shown in healthcare professionals' increasing care to detail in their observations and check-ups. Implementation of more frequent screenings could reveal women who may need help, whether it be prenatal, directly postpartum, or further along in the postpartum period. Healthcare professionals may also include screenings for postpartum anxiety. According to Field (2018), healthcare professionals may not be as concerned about postpartum anxiety, though many women can suffer from it. Furthermore, a standardization and regulation of this care may benefit women across racial and socioeconomic statuses. The installation of preventative measures may help prevention and early detection of symptoms, resulting in decreasing the prevalence of postpartum depression and anxiety. These preventative measures can come in the form of education about who may be at risk, what the warning signs are, and how to get help (Sangsawang, Wacharasin, & Sangsawang, 2018).

Further, significant protective support may come from the government. The United States has poor family leave policies. Family leave, especially when paid, may alleviate stressors that women and partners feel in returning to work in a specified amount of time or in time to be able to pay bills, while still creating a bond with the baby in time and readjusting to a new normal. Extended paid family leave could significantly help postpartum women and their families (Chatterji & Markowitz, 2008).

About 11% of women in America experience postpartum depression and anxiety (Centers for Disease Control and Prevention, 2018a; Matthey et al., 2003). While this means that 1 in 9 women are experiencing similar moods and thoughts, a strong stigma remains. The results of this study, as well as other research, may act as a catalyst for change and understanding of what

contributes to the development of these symptoms, how to take preventative measures, and the need for encouragement to women who have experienced postpartum depression and anxiety to talk about their experiences and end the stigma. Studies have shown that advocating and being vocal about mental illness lowers stigma, as well as educating individuals on mental illness (Pinfold, Thornicroft, Huxley, & Farmer, 2005). Specifically, attributional framing was an effective method in decreasing the stigma of postpartum depression (Ruybal & Siegel, 2018). Future research may seek to understand the most beneficial means of using attributional framing to decrease stigma and to understand the consequences of less stigma within the postpartum period.

This study's findings are important to help further knowledge of the postpartum experience, but there are a few limitations. First, the study sample lacked racial/ethnic diversity. The sample mainly consisted of primarily White/Caucasian individuals (86.2%), while all other races/ethnicities comprised no more than 5% within their respective groups. Furthermore, the majority of participants reported a higher socioeconomic status, with 74.2% to 81% having a household income near or above the national median of $60,336 (Guzman, 2018). In addition, this study primarily relied on self-report measures. These measures are not diagnostic interviews and, therefore, are only capturing depressive and anxiety symptoms, not the presence of a diagnosable disorder. Another limitation of this study is the sensitive nature of the topic and the stigma surrounding it. There are strict expectations of being a mother, and, though all responses were anonymous, some individuals may not have reported their true levels of depressive and anxiety symptoms, as well as social support and perfectionism. Similarly, it may be that postpartum women, and society as a whole, are more understanding and accepting of being worried than being depressed. It could be argued that excessive worry toward the health and

wellness of a new baby is normal and even favorable. Meanwhile, feelings of sadness and lack of interest in a new baby are seen as unacceptable. Because of this, participants may have felt uncomfortable reporting their symptoms truthfully. A final limitation of this study is that the Superwoman Scale is not specific to postpartum women and has been used primarily in eating disorders research. Thus, expectations and role management in the postpartum period may be different for postpartum women.

Future research needs to extend efforts toward postpartum anxiety as it is largely understudied but as prevalent, or even more prevalent, than postpartum depression (Matthey et al., 2003). Specifically, research may focus on developing and validating a measure specific to anxiety in the postpartum period, as many items on other measures can overlap with the adaptation of having a new child. Further, future research may need to examine more closely the role of maladaptive perfectionism and the societal pressures on women to balance multiple roles without adequate support, as this study was unable to differentiate adaptive and maladaptive perfectionism. This may be done through use of perfectionism scales that were created to measure maladaptive perfectionism, such as the Frost Multidimensional Perfectionism Scale or the Almost Perfect Scale-Revised (Frost & Martin, 1990; Slaney, Rice, Mobley, Trippi, & Ashby, 2001). Moreover, much of the research on the Superwoman schema has been done with concerns to African American/Black women and the specific pressures placed on them. The small number of women who identify as African American in this study did not allow for post-hoc analyses by race/ethnicity. Yet, understanding the differences that African American/Black women face in their postpartum period as compared to White/Caucasian women is important, especially due to disparities in healthcare. African American/Black women are nearly three times more likely than White/Caucasian women to die in the postpartum period (Centers for Disease

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Appendix A

Table 1.Demographics

	n	%
Gender	595	99.8
Female	591	99.3
Transgender	4	.6
Race	596	100
Asian/Asian American	15	2.5
Black/African American	10	1.7
Hispanic	27	4.5
Multiracial	27	4.5
White/Caucasian	514	86.2
Other	3	.5
Relationship status	596	100
Never married	7	1.2
Married	517	86.7
Divorced/separated	4	.7
Living with someone in an intimate relationship	68	11.4
Income level	592	99.3
$0 to $14,999	11	1.9
$15,000 to $24,999	19	3.2
$25,000 to $34,999	27	4.6

$35,000 to $44,999	25	4.2
$45,000 to $54,999	31	5.2
$55,000 to $64,999	40	6.8
$65,000 to $74,999	40	6.8
$75,000 to $84,999	57	9.6
$85,000 to $94,999	56	9.5
$95,000 to $104,999	72	12.2
$105,000+	214	36.1
Employment status	596	100
Employed, full-time	332	55.7
Employed, part-time	74	12.4
Unemployed, intentions of returning within a year	58	9.7
Unemployed, no intentions of returning within a year	76	12.8
Stay-at-home mother	23	3.9
Maternity/disability leave	15	2.5
Self-employed	14	2.3
Other	4	.7
Education Level	596	100
Some high school	4	.7
High school/GED	28	4.7

Some college	91	15.3
Associate's degree	59	9.9
Bachelor's degree	229	38.4
Master's degree	151	25.3
Doctoral degree	34	5.7
Depression/anxiety diagnosis	596	100
Depression only	42	7.0
Anxiety only	83	13.9
Depression and anxiety	174	29.2
Neither	297	49.8

Appendix B

Table 2.Pearson r Correlations of predictor and outcome variables

	1	2	3	4	5	6	7	8
1. Significant other support (MSPSS)	1	–						
2. Family support (MSPSS)	.75**	1	–					
3. Friend support (MSPSS)	.57**	.59**	1	–				
4. Social support total (MSPSS)	.88**	.89**	.84**	1	–			
5. Perfectionism (SWS)	.10*	0.07	0.08	.10*	1	–		
6. Anxiety subscale (EPDS)	-.16**	-.27**	-.31**	-.29**	0.07	1	–	
7. Depression (EPDS)	-.22**	-.35**	-.37**	-.36**	0.03	.88**	1	–
8. Anxiety (GAD-7)	-.11**	-.26**	-.30**	-.26**	0.05	.77**	.80**	1

Note: ** p ” .01 level (2-tailed)

Appendix C

Figure 1.Moderation of social support on the re

Appendix D

Figure 2.Moderation of social support on the relationship between postpartum anxiety

symptoms and perfectionism

Impact of perfectionism on postpartum anxiety symptoms under the influence of social support