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Maternal expectations of postpartum social support: validation of the postpartum social support questionnaire during pregnancy

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Abstract

Thirteen percent of women experience postpartum depression. Prenatal screening for anticipated postpartum social support, a postpartum depression risk factor, may allow for early intervention. We sought to validate use of a modified version of the Postpartum Social Support Questionnaire (PSSQ) in pregnant women at increased risk for postpartum depression. Factor analysis using orthogonal varimax rotation was used. The modified PSSQ, administered during pregnancy, yields similar loading patterns as observed in postpartum administration of the original PSSQ.

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Keywords

Social support; Postpartum; Postpartum depression; Pregnancy

Introduction

An estimated 13 % of US women experience postpartum depression (PPD) (Breese McCoy 2011; Gavin et al. 2005). Because PPD results in increased morbidity for women, their infants, and their families, early identification of those at risk for PPD is vital for safeguarding familial well-being. Poor social support during the postpartum period is an important risk factor for PPD (O'Hara 1986; Xie et al. 2010; Gremigni et al. 2011).

Validated measures of postpartum social support, including the Postpartum Social Support Questionnaire (PSSQ), are available but cannot be administered before delivery. However, the maternal expectation of the level of postpartum social support can be assessed during pregnancy. Pregnant women who anticipate poor social support following delivery may be among those at risk for PPD. Alternatively, those with an expectation for high levels of postpartum social support that is unfulfilled may also be at risk for PPD (Logsdon and McBride 1994). We sought to fill the gap for a measure of maternal prenatal expectation of postpartum social support utilizing a modified version of the PSSQ and validate its use in a sample of women at risk for PPD.

Methods

Study participants were drawn from a convenience sample of pregnant women aged 18–45 at the Emory Women's Mental Health Program participating in a prospective observational study of the perinatal course of psychiatric illness. Women were referred to the Women's Mental Health Program from community obstetric or psychiatric care providers. Most participants had lifetime histories of a mood and/or anxiety disorder, and many were receiving psychotropic treatment. Per the study protocol, women were evaluated every 4–6 weeks during pregnancy and more frequently as dictated by their clinical needs. All participants provided written informed consent, and study participation was independent of their treatment. This research was approved by the Emory University IRB.

The PSSQ is a 50-item self-administered questionnaire designed to measure social support received by new mothers (Hopkins and Campbell 2008). The PSSQ measures both emotional and instrumental social support received from the spouse/partner, parents, in-laws, and other family and friends. We modified the PSSQ for administration during pregnancy to measure the level of postpartum support anticipated by pregnant women during the third trimester. The modification entailed altering the verb tense of PSSQ items from present to future tense. PSSQ items were otherwise unchanged. For example, the item "How often *does* your husband/partner help to take care of the baby (feeding, diapering, bathing, etc.)?" was changed to "How often *will* your husband/partner help to take care of the baby (feeding, diapering, bathing, etc.)?".

For some study participants, multiple third trimester observations, across multiple pregnancies were available. To avoid autocorrelation in the data, only the first observation for the first pregnancy present in the study database for each individual was included in the analyses. Demographic characteristics are displayed as means or percentages, as appropriate. Confirmatory factor analysis was performed as described by Hopkins and Campbell in their original validation paper (Hopkins and Campbell 2008). Briefly, we used the maximum likelihood method of factor selection with an orthogonal varimax rotation. A loading score criterion of 0.32 was used. All analyses were performed in SAS 9.3 (Cary, NC).

Results

Data for 264 administrations of the prenatal expectation version of the PSSQ were available. Forty repeat observations were excluded. After excluding an additional 37 women with incomplete prenatal PSSQ administrations, 187 participants were retained in the data set. Descriptive characteristics of the participants are shown in Table 1. The homogeneous sample was predominantly white, non-Hispanic, and married. Most pregnancies were planned and desired. Participants completed the PSSQ in the 31st (± 2.3) week of pregnancy.

Table 2 shows the item loading scores for the prenatal expectation version of the PSSQ. For anticipated partner support (items 1–15), 12 of the 15 items loaded with scores greater than 0.32. The three items failing to load on the partner support subscale also failed to load on any of the other three factors. On the parent subscale (items 16–26), the in-law subscale (items 27–35), and the friends and other family subscale (items 36–50), all items loaded at or above 0.32. The loading pattern for all four factors is very similar to that observed by Hopkins and Campbell in their validation of the original PSSQ.

Discussion

The postpartum social support questionnaire, when modified for administration during the third trimester of pregnancy, appears to be a valid measure of anticipated postpartum social support in a homogeneous population of pregnant women with history of psychiatric illness. These novel data warrant further exploration in a more heterogeneous population.

The loading patterns for all four factors are similar to those observed by Hopkins and Campbell in their original validation of the PSSQ instrument. In contrast to the original validation study, we observed all items on the parent, in-law, and other family and friends subscales loading strongly using at or above the factor loading criterion of 0.32. It is interesting to note that on the partner support subscale, the items that failed to load strongly on any factor were related to negative behaviors. As an example, item 8, “How often will your husband/partner disagree with you about how the baby should be handled?”, loaded at less than 0.1 on each of the factors. It is possible that expectant mothers are reluctant to make overly negative assumptions about their partners.

Identifying risk factors for PPD during pregnancy, including assessments of anticipated social support, may provide an opportunity for early intervention to aid in prevention of PPD (Dennis et al. 2009). In addition to providing a tool for earlier assessment of postpartum support, the modified version of the PSSQ may be used in conjunction with postnatal

administration of the original PSSQ to assess whether maternal expectation of postnatal support is fulfilled.

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Table 1Demographic characteristics of 187 pregnant adult females with psychiatric conditions, Atlanta, GA ($n = 187$)

Characteristic	Mean	SD	N	%
Age (at delivery)	32.7	4.7		
Week of gestation	31.1	2.3		
Race				
White			158	84.5
Black			16	8.6
Asian			6	3.2
Multiple races			6	3.2
Native American			1	0.5
Hispanic ethnicity				
Non-Hispanic			183	97.9
Hispanic			4	2.1
Years of education				
>12			180	96.3
12			7	3.7
Marital status				
Married			157	84.4
Never married, living with partner			13	7.0
Never married, lives alone			10	5.4
Divorced			4	2.2
Separated			2	1.1
Living situation				
With husband			154	82.8
With partner			16	8.6
With family of origin			12	6.5
Alone or w/ roommate			4	2.2
DSM-IV diagnosis ^a				
Major Depressive Disorder			100	53.5
Bipolar Disorder			63	33.7
General Anxiety Disorder			51	27.3
Panic Disorder			48	25.7
Post-Traumatic Stress Disorder			38	20.3
Social Anxiety Disorder			27	14.4
Obsessive Compulsive Disorder			23	12.3
Depression, Not otherwise specified			3	1.6
Schizophrenia			1	0.5
Pregnancy intention				
Planned			136	72.7
Unplanned			49	26.2
Unknown			2	1.1

Characteristic	Mean	SD	N	%
Desire for pregnancy				
Desired			150	80.2
Ambivalent			30	16.0
Undesired			3	1.6
Unknown			4	2.1
Gravidity	2.3	1.4		
Parity	0.7	0.8		

^aDSM-IV diagnoses determined by SCID. Diagnoses are not mutually exclusive

Table 2

Postpartum social support questionnaire—prenatal expectation version: factor loadings at 31 weeks gestation

Item	Maximum Likelihood			
	Factor1	Factor2	Factor3	Factor4
Husband/partner				
1. How often will your husband/partner help to take care of the baby?	0.800	0.055	0.034	0.131
2. How often will your husband/partner play with the baby?	0.824	0.039	0.037	0.144
3. How often will your husband/partner soothe the baby when he/she is upset?	0.819	0.008	0.026	0.140
4. How often will your husband/partner watch the baby so you can go out by yourself?	0.630	0.094	0.158	0.157
5. How often will your husband/partner help out in other household chores?	0.710	0.148	−0.003	0.084
6. How often will your husband/partner help out with family meals?	0.556	0.115	0.000	0.103
7. How often will your husband/partner help with grocery shopping?	0.497	0.167	0.033	0.093
8. How often will your husband/partner disagree with you about how the baby should be handled?	−0.012	−0.091	0.010	−0.039
9. How often will your husband/partner indicate to you by words or behavior that he knows that it is hard work to take care of a baby?	0.483	0.195	0.066	0.045
10. How often will your husband/partner indicate dissatisfaction with the change in routine after the baby's birth?	−0.093	−0.045	−0.051	0.048
11. How often will your husband/partner indicate dissatisfaction with the amount of time you have to spend together after the baby's birth?	−0.046	0.054	−0.011	−0.052
12. How often will you talk about the baby with your husband/partner?	0.584	−0.034	−0.043	0.070
13. How often will you confide in, share your problems with, or tell your problems to your husband/partner?	0.746	0.109	−0.065	0.088
14. How often will your husband/partner confide in, share his problems with, or tell you his troubles?	0.555	0.189	0.048	0.086
15. In general, do you feel you husband/partner will be supportive after the baby's birth?	0.776	0.104	0.009	0.127
Parents				
16. How often will you have contact with your parent(s) in person?	0.154	−0.048	0.772	0.076
17. How often will your parent(s) help with the baby?	0.060	0.017	0.825	0.158
18. How often will your parents baby-sit?	−0.020	0.027	0.840	0.204
19. Do you feel you will be able to count your parent(s) for financial help, if you should need it?	0.123	0.155	0.417	0.077
20. How often will your parent(s) help with other practical matters (i.e., household chores, errands)?	−0.091	0.037	0.680	0.180
21. How often will you and the baby spend time with your parent(s)?	−0.065	0.084	0.893	0.155
22. How often will you confide in, share your problems with, or tell your troubles to your parent(s)?	−0.034	0.144	0.603	−0.014
23. How often will your parent(s) confide in, share their problems with, or tell you their troubles?	−0.006	0.151	0.368	−0.029
24. How often will your parent(s) give you advice or guidance about the baby?	0.017	0.049	0.387	−0.052
25. How often will you discuss your concerns about the baby with your parents?	−0.026	0.155	0.506	−0.027
26. In general, do you feel that your parent(s) will be supportive after the baby's birth?	0.193	0.184	0.553	−0.094
Parent(s)-in-law				
27. How often will you have contact with your parent(s)-in-law in person?	0.133	0.174	0.028	0.819
28. How often will your parent(s)-in-law help with the baby?	0.152	0.139	0.085	0.920
29. How often will your parent(s)-in-law baby-sit?	0.056	0.113	0.111	0.886

Item	Maximum Likelihood			
	Factor1	Factor2	Factor3	Factor4
30. Do you feel you will be able to count on your parent(s)-in-law for financial help if you should need it?	0.199	0.256	-0.063	0.397
31. How often will your parent(s)-in-law help out with other practical matters?	0.183	0.191	0.056	0.814
32. How often will you and the baby spend time with your parent(s)-in-law?	0.151	0.181	0.096	0.832
33. How often will you confide in, share your problems with, to tell your troubles to your parent(s)-in-law?	0.090	0.181	0.115	0.610
34. How often will your parent(s)-in-law confide in you?	0.040	0.199	0.112	0.465
35. How often will your parent(s)-in-law give you advice or guidance about the baby?	0.150	0.153	-0.062	0.373
Other family or friends				
36. How often will you have contact with other relatives or friends in person?	0.222	0.593	0.289	0.170
37. How often will your other relatives or friends help out with the baby?	0.093	0.789	0.157	0.131
38. How often will your other relatives or friends baby-sit for the baby?	0.065	0.758	0.094	0.152
39. Do you feel you will be able to count on other relatives or friends for financial help if you should need it?	0.119	0.377	0.058	0.049
40. How often will other relatives or friends help out with other practical matters?	0.065	0.630	0.133	0.141
41. How often will you and the baby spend time with your other relatives or friends?	0.112	0.768	0.193	0.207
42. How often will you spend time alone (without the baby) with relatives or friends?	0.162	0.339	0.108	0.101
43. How often will you confide in, share your problems with, or tell your troubles to your relatives or friends?	0.074	0.631	0.013	0.069
44. How often will your relatives or friends confide in you?	0.072	0.617	0.006	0.037
45. How often will other relatives or friends provide advice or guidance about child care?	0.014	0.429	0.060	0.163
46. How often will you discuss your concerns about the baby with other relatives or friends?	-0.010	0.591	0.060	0.037
47. Do you feel that you will have someone to whom you can turn for expert advice about the baby (i.e., pediatrician, family, doctor, public health, nurse)?	0.186	0.371	0.271	0.039
48. Do you feel you will have someone (besides family or friends) available to baby-sit?	0.113	0.366	0.125	0.213
49. In general, do you feel your relatives will be supportive after the birth of the baby?	0.242	0.444	0.341	0.119
50. In general, do you feel your friends will be supportive after the birth of the baby?	0.236	0.555	0.191	0.094