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An Exploration of Postpartum Depression Internet Support Groups

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# Finding Support: An Exploration of Postpartum Depression Internet Support Groups

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Abstract: Postpartum depression (PPD) occurs among 10 to 20% of women following childbirth and affects maternal health, infant development, and familial relationships. Adequate social support and peer-based support groups offline can reduce women's depressive symptoms and reach a broader audience than traditional clinical services. PPD Internet support groups (ISGs) may provide a simple, cost-effective way for women with limited time to garner social support and information, yet no information on social support in this context is available. This study employs a content analysis of PPD ISGs to answer the research question: What types of social support are provided in these groups? Data consisted of 1,217 discussion posts collected from three forums. Findings indicated that five dimensions of social support (informational, emotional, esteem, tangible aid, and network support) that commonly occurr offline were also provided online in a majority of the posts, with emotional and informational support being the most frequent. Forum moderators played a key role in support provision; they were proactive in reiterating that participants were not trained medical professionals and that forum users should seek out professional medical help and discuss their concerns with their physicians. Our results suggest that ISGs can provide useful resources, information, and emotional support for women with PPD, especially if they lack offline support and face constraints in accessing offline peer support. Moderated sites may provide an accessible and low-cost peer support system that is useful in conjunction with regular postpartum care to improve women's well-being.

Keywords: e-Health, Mental Health, Internet Support Groups, Social Support, Postpartum Depression, Postnatal Depression

### Introduction

epression is a serious health issue that affects 10–20% of women during the pre- and postnatal period (O'Hara and McCabe 2013). Postpartum depression (PPD) can have deleterious effects on child development and prolonged effects on key familial relationships (Beck 2002; Milgrom et al. 2006). Social support from key relationships can help to reduce a woman's risk for PPD during this transitional period (Milgrom et al. 2006). Peer support (mother-to-mother) groups may help alleviate a new mother's distress and enhance psychosocial functioning (Dennis and McQueen 2009; Chen et al. 2000.)

For mothers who do not have the time, energy, and access to resources (e.g., transportation) to participate in face-to-face support group meetings, Internet forums and support groups may provide an alternative venue to receive and provide information, advice, and emotional support. Depression support groups tend to be the most common type of Internet support group (ISG) on the web, and there are a number of online support groups focused on PPD (e.g., http://ppdsupportpage.com) (Davison, Pennebaker, and Dickerson 2000). As comfort with using the Internet for health information grows, use of PPD ISGs will likely increase. Presently, we know little about the content within these spaces, in particular the kinds of information and social support provided within them. To address this gap, we conducted a content analysis of messages posted on ISGs for women with postpartum depression. Such an analysis will inform practitioners and researchers about the kinds of PPD-related resources that are sought and provided within online support groups and help them to appropriately respond to patients who report using them. Findings will assist researchers and others interested in designing online interventions to enhance postpartum care.

Postpartum Depression and Social Support



Postpartum depression (PPD) is characterized by an intense period of sadness occurring within four weeks after childbirth (American Psychiatric Association 2013). A depressive episode may include decreased appetite, insomnia, decreased energy, feelings of worthlessness or guilt, intense irritability, frequent mood swings, a lack of interest in daily activities, thoughts of harming one's self or baby, and difficulty bonding with the baby (American Psychiatric Association 2013). Evidence suggests that PPD is associated with a range of negative health outcomes for the mother (e.g., future episodes of depression), child (e.g., delays in emotional development and language skills, long-term behavioral problems, child neglect and abuse), and family (e.g., marital stress leading to separation or divorce); moreover, psychosocial variables such as life stress, child care stress, marital conflict, low-maternal self-esteem, and lack of social support have been implicated in PPD (O'Hara and McCabe 2013; Dennis and McQueen 2009, Milgrom et al. 2006, Beck 2002).

Social support is an interpersonal transaction involving emotional concern (e.g., love or empathy), instrumental aid (e.g., goods or services), information, or appraisal (e.g., information relevant to self-evaluation) (House 1981). It may take the form of verbal and nonverbal communication between the recipient and provider (i.e., friend, colleague, social support group, or family member). For women with PPD, social support in the form of regular telephone calls, support group meetings, or online support groups could provide key resources during this transition period.

The literature suggests that social support from peers can reduce a woman's risk of PPD and enhance postnatal psychological outcomes and be an effective intervention for PPD (Campos et al. 2008; Dennis and McQueen 2009; Dennis 2010). For example, women who received individualized, telephone-based peer support over 12 weeks from a trained mother, who had experienced and recovered from PPD, showed lower postnatal depression scores than participants in the control group (Dennis 2003). A similar study conducted in Taiwan, found that mothers who attended weekly support group meetings showed lower depression levels and perceived stress compared to a control group (Chen et al. 2000). Face-to-face PPD support groups are widely available with over 100 local support networks available worldwide (Postpartum Support International).

#### **ISGs**

In recent years, the Internet has become an important source of health information through resources such as web sites, discussion boards, support groups, physician blogs, and interactive sites that allow users to ask physicians medical questions (e.g., www.MDAdvice.com) (Fox and Jones 2009; Linares and Subrahmanyam 2012). ISGs are asynchronous forums that participants can access via email, messaging, chats, and links in a user-friendly web space at their convenience to share, solicit, and receive information or advice relating to a specific topic (Barak and Sadovsky 2008). Forum users or "posters" register with a site under a profile name and participate in the forum by posting their own thoughts, asking questions, and responding to other posts. Users can choose to be less active and browse through posts and responses from previous discussion threads.

Since the emergence of ISGs, many researchers have noted some of their potential advantages. For instance, ISGs allow users to interact with a more heterogeneous group of people and are accessible 24 hours a day, 7 days a week (Coulson, Buchanan, and Aubeeluck 2007). They provide a low cost venue for peer interaction and are unbound by the physical constraints of time and space. ISGs may provide a safe haven of acceptance and information connected by a common experience where users can be blind to each other's race/ethnicity or disability. For some patients, an online forum may be the only space where they can openly express their frustrations, ask advice, and have others listen to their difficulties, especially when dealing with a health condition that may be taboo such as PPD (Tanis 2008).

ISGs may be a source of information and social support for individuals suffering from chronic health conditions. Content analyses of health-related ISGs (e.g., irritable bowel syndrome, HIV/AIDS) revealed that emotional and informational support are the predominant forms of social

support appearing in messages on these sites (Mo and Coulson 2008; Coulson, Buchanan, and Aubeeluck 2007). Although a majority of individuals with chronic conditions receive most of their support offline, ISGs provide an alternative avenue of support with reduced stigma; importantly they provide an opportunity to interact with others experiencing similar difficulties and who can relate to their experiences and provide companionship (Tanis 2008; Fox and Purcell 2010). Similarly, Internet use among cancer patients has been associated with increased social support and decreased loneliness leading patients to handle their illness more effectively (Eysenbach 2008; Griffiths et al. 2009). Although only a few randomized controlled trials have examined the effectiveness of depression ISGs, their findings are promising, especially when combined with therapy (Griffiths et al. 2012).

#### Postpartum Depression and Peer Support

An emerging body of literature has indicated that volunteer based peer support programs can significantly reduce depressive symptoms for women who are at risk for PPD (Shaw et al. 2006; Pfeiffer et al. 2011; Chen et al. 2000; Dennis et al. 2009). Such peer support groups can reach a broader audience than traditional clinical services and may help patients suffering from depression because they reduce isolation, decrease stress, and increase sharing of health information through the provision of emotional, informational, and appraisal support (Dennis 2003). However, no studies to date have examined peer support provision within PPD Internet forums.

#### Rationale for the Study

With the recent rise of online support group use, there is a clear need for researchers to explore the experiences of mothers in PPD forums. Thus far, little attention has been given to online support groups for this illness. Meanwhile, we know little about the type of support being provided within these forums among peers. The present study aims to fill this gap by conducting a content analysis of social support provision in ISGs for women with postpartum depression. We believe that this study is the first to examine the types of support provided within PPD ISGs. These findings will help to document the support related discourse within these forums, and will inform research on the effectiveness and viability of PPD ISGs for postpartum care, and inform practitioners about this resource.

#### Method

First, we conducted a Google search using terms such as "postpartum depression," "postnatal depression," "online support group," and "Internet support group" in order to find ISGs that catered specifically to postpartum mood disorders or depression among mothers. Three criteria were used to identify an ISG that could potentially be included in our sample (1) it had to contain discussion forums for users suffering from PPD or who had previously suffered from PPD, (2) its forum and posts were in English, and (3) it was publicly accessible and required users to register and obtain a username prior to posting in an ISG forum. Using these criteria, we identified eight ISGs; we then selected five, which were chosen to encompass low, moderate, and high levels of activity. The first author contacted the administrators of the five sites via email, described the project and requested permission to analyze the content of their forum. Three responded and provided written consent to use forum posts, after which we obtained approval from the authors' University Institutional Review Board.

#### Post Selection

A corpus of 1217 posts (200 ISG discussion threads) were identified from two postpartum depression sites and one postpartum mood disorder site; discussion posts listed from 2006-2010

were downloaded. Time sampling was used for the entry selection of all three ISGs meaning that we equated the time span for all 3 discussion boards because each ISG had a variable number of posts available. Steps were taken to make sure posts were equivalent in nature meaning that they provided opportunities for meaningful exchange and were selected from the ISGs. Posts that simply listed resources or gave people's story of dealing with PPD were excluded. One highly active site had several posts over a several year span so we selected a limited number of current (2009-2010) entries. Due to the fluid and changing nature of the Internet we downloaded and saved the threads as html files for subsequent analysis. All usernames have been changed in order to protect the anonymity of the forum users.

#### **Coding**

We conducted a content analysis of 1217 posts informed by media content analysis and prior research (Krippendorff 1980). Individual posts were considered the unit of analysis; therefore each post was examined individually. A binary code for the presence or absence for any of the five categories of social support was used for each post. All posts were coded using an adapted version of Cutrona and Suhr's (1992) social support categories from Coulson and colleagues (2007), which included emotional support, informational support, network support, esteem support, and tangible assistance. We coded the username and date for each post as well as the number of views per discussion thread for sites where this information was accessible. Proactive posts and entries that gave information or support without requests for support were coded as well.

### **Coding Training**

Early on it became clear to us that ISG entries were very complex and a single message contained multiple types of support, therefore the first author and a RA worked together to refine and clarify the social support categories. Subsequently, the first author trained two RAs to identify and code the type of social support provided. During training, the research team coded older ISG entries together and then worked independently. The researchers completed several rounds of training until coders agreed on the definitions. The operational definitions for the coding system consisting of five social support categories along with examples of posts are listed in Table 1.1.

Table 1.1: Social Support Categories

Category	Definition	Example
Emotional Support	Messages containing emotional support are characterized by the provider communicating love, empathy, or concern for the recipient. These messages are intended to validate and encourage recipients, who report encountering difficulties.	Susan, you will get better! I got better, Jenny got better, Melinda, and hundreds of other ladies that have come through the board. It is possible! I know some days it seems like it isn't, but it is. You will get there. Just keep fighting!
Informational Support	These postings give fact-based information and provide suggestions for coping with PPD symptoms and related stressors.	This illness is not an uncommon one. Medical professionals can and will be able to help you. Do not hesitate and do not wait for a better day. Go to the phone and call your doctor for an appointment. If you'd like to, you can also go to the Postpartum

		Support International website and find you state coordinator
Network Support	Entries containing network support are characterized by the providers communicating recipients' inclusion in the PPD support group or ability to identify with participants' similar concerns or experiences.	You have come to a wonderful place for support. Keep posting. We are here for you.
Esteem Support	Messages characterized by esteem support indicate the poster's respect, admiration, or confidence in the recipient's abilities while dealing with PPD.	I am so proud of you!!!! You are a brave person and I know you will beat this!!!
Tangible Assistance	These messages indicate times when providers would give or offer to provide goods or services to the recipient.	I agree. We need to know that you are safe. Either private message me or Pam with your number so that we can talk with you and your hubby right away.

#### **Coding of Posts**

We selected roughly 12% of the study sample (N=98 posts) to be coded by two RAs to calculate interrater reliability; any coding discrepancies were resolved by the first author adopting a procedure used by Regan and colleagues (2007). Inter-rater reliability, measured by Cohen's kappa, was calculated for the five main categories using the Recal 2 reliability calculator (http://dfreelon.org/utils/recalfront/) (Freelon 2010). Cohen's kappa ranged from 0.81-1.00 for the five categories of support suggesting excellent levels of consistency between the raters. After establishing high reliability, the RAs coded the remaining posts.

#### Results

Findings indicate that participants frequently described the emotions and feelings they experienced while struggling with PPD. Veteran PPD Moderators often responded to posts and served as the guides of these communities, providing support to discouraged and confused women, directing them to seek out professional help, and reassuring posters that everything would turn out fine. Our analysis revealed that multiple forms of social support were provided within 66% of the 1217 posts analyzed (see Figure 1). As can be seen in Figure 1, emotional and informational support were the most frequent kind of support within our sample of posts. Forum entries were full of information on PPD, encouragement, and support for participants. Network and esteem support and tangible assistance, although present, were relatively infrequent in the forums.

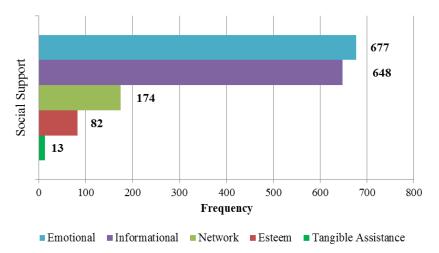


Figure 1: Number of Social Support Types Occurring in ISG Posts

Threads that started with requests for help almost always were followed with responses containing emotional and informational support.

Original post: I am 9 months postpartum and still struggling with this PPD monster. I was on Lexapro and Klonopin, both of which did not work for me. I have been seeing a therapist since about 2 months postpartum, and she keeps telling me to be put on a different med. I am really reluctant to be on more meds, due to the awful side effects from the first meds. Every day is a struggle for me. I am working part time 3 days/week, and have been calling out of work and having my husband still drop our daughter off to day care just so I can sleep all day. The 2 days/week I have our daughter is miserable for me, as I hate being alone with her...

Informational Support Response #1: Hello and welcome. The longer that you have this without treatment the longer it is going to take to get better. You can try some more natural treatments. You can look into sam-e, l-tyrosine, omega 3.6.9 and vitamin D. You can also have your doctor take a thyroid panel, and test the levels of your other hormones and see if something is off there.

Emotional Support Response #2: Hi, I just wanted to let you know that you are not alone. I felt much like you did when my son was younger. He is 15 months now and I love him and enjoy being with him, but up until he was eight months old I didn't feel like I loved him or like I wanted to be with him. I would also send him to daycare and stay home from work just so I could sleep...

Surprisingly, similar discussion threads where new users requested help were also the threads with the highest number of views, meaning that these threads were important not only to the original posters, but also to other forum and Internet users as well. Some posts (1%) by moderators and frequent forum users at the beginning of a discussion thread were proactive meaning that they preemptively provided general information and support to forum users about seeking treatment or encouragement without any prior requests for help.

#### **Emotional Support**

Emotional support occurred most frequently within PPD ISGs as 56% of entries contained reassurance, empathy, encouragement, and validation to posters who reported struggling with PPD symptoms. Many users reported feeling alone and were concerned about their PPD symptoms. For example, the user below reaches out to others in the community by asking for validation of her PPD experience and symptoms. Her peer responds by providing emotional support that validates her experiences, and reminds her that these symptoms are common for women with PPD. She offers her hope by reminding her that she will get through this difficult time.

Original post: I am new to the group and really need support. I was recently diagnosed with PPD when my son was 15 months old (he is now 17 months old). I questioned this since I have been told that people get PPD within the first year. My doctor and therapist believe I had a mild case of PPD. However, when my baby was 15 months old, I had an implant put in my mouth and had a reaction to the antibiotics (did not sleep and had major dizziness for two weeks and freaked out). After those two weeks, I was a mess, depressed, felt distant from my baby, scared, etc. I really started questioning myself. Please help and let me know I'm not going crazy and that things will get better. I'm on Zoloft for 4 weeks and I still have all of the above (just not at the same level as before).

Response: Welcome. Try not to focus on the label of PPD. You are seeking treatment now for your depression and that is what matters. You sound like a lot of mothers on this board. You are not alone. Keep in mind that meds can take 6-8 weeks to kick in. You will continue to see results. It sounds like you are taking the right steps in seeking treatment. You will get through this.

As other posters shared their experiences and feelings on the forum, they reported that participating helped them realize that they were not alone. Users may be empowered and validated by responses to their posts, realizing that their experiences were reflected within their community. The frequency of posts indicating such empowerment in our sample suggests that the emotional support provided in the forum may be especially relevant and helpful to mothers suffering from PPD.

#### Informational Support

Informational support occurred within 53% of the entries and was the second most frequent type of social support found within the posts. Many mothers reported experiencing difficulty expressing their symptoms and concerns to doctors. Several forum users also reported being unaware that PPD was a common mental illness. Moderators often urged new posters to contact professionals for treatment or to address their concerns regarding difficulties or side effects with anti-depressant medication. Additionally, users shared helpful resources such as professional websites or books on PPD. This type of support may be helpful in the decision-making processes of seeking treatment or choosing a course of action. Moderators often warned users that the advice provided on the forums should not be taken authoritatively because participants were not medically trained. A sample response coded as containing informational support is provided:

Welcome. Please find the time to see a doctor, get properly diagnosed, and properly treated. The earlier you tackle this on the better. Please use your support systems now and get someone to watch the baby while you go to your well needed, well deserved, appointments. You CAN get better with proper treatment.

#### Network Support

Consistent with Coulson and colleagues (2007), this category dealt only with structural connections between group members. Accordingly, posts that contained referrals to professionals were coded under information support. Network support was present within 14 % of the entries. Such messages invited forum users to participate in group discussions, update fellow members on their progress with PPD, and remind them of the available support system.

# Esteem Support

Esteem support occurred within 7 % of the entries. Typically, posters praised individuals by noting their strengths or attributes when encountering stressful situations. Messages containing esteem support may be a source of encouragement for ISG users on the site.

# Tangible Assistance

Few entries in our sample contained tangible assistance (1%). These entries included requests from other posters to perform an action or to meet a need. Because forum posters can use private messages to ask for personal assistance outside of public view, it is possible that our sample did not capture all transactions of tangible assistance occurring in the ISGs. One common form of tangible assistance that occurred in the forums were women offering to provide support offline. Below a forum user trusted her peers enough to share her difficulties dealing with PPD and her needs. Her trust was rewarded by a peer offering to connect offline who is going through a similar experience.

Original post: Hello, I'm here because I do believe I have PPD. I had my son 5 weeks ago. I love him so much. I don't feel any ill feelings toward him at all and I don't have any feelings of not wanting to care for him or anything like that...When it comes to my life I don't feel that depressed. But for some reason I have these very scary moments when I see something sad in the world....I'm just looking for help in any way I can and hope that someone can relate or understand what I'm going through and can give me some hope that it will get better.

Response: Becky786, I too am having a hard time with being alone! That's a subject I never touched on in the first post because it was already so long. Would you like to exchange phone numbers so we can call and talk to each other about this? I could really talk to someone who is going through something similar to me right now. I think it would help us both! We both have 5 week olds too. Would you be up for that?

#### Discussion

Our goal was to examine the provision of social support through a content analysis of messages on postpartum depression Internet support groups. Findings revealed that most entries sought to provide other users with support and further information on PPD. Most forum responses contained several types of social support, emotional and informational support, yet tangible assistance was relatively infrequent. We found that women often came to sites in a vulnerable state looking for support and information. From the generally supportive and non-medical tone of the discourse, it appears that the sites served as a haven where women could receive support. Our findings are similar to those from studies of face-to-face support groups (e.g., PPD, cancer, etc.) and ISGs for other conditions and diseases confirming that emotional and informational support are the primary modes of support provided and may help women during this difficult time (Chen et al. 2000; Dennis 2010; Coulson, Buchanan, and Aubeeluck 2007; Mo and Coulson 2008). These findings are also consistent with the unique challenges that women with PPD face, such as a lack of knowledge about symptoms, limited support or offline resources to draw on, reluctance to seek

treatment, and questions about the side effects from PPD medication. Emotional support is more commonly provided by women and it is not surprising that it dominated the ISG discourse directed towards females (Mo, Malik, and Coulson 2009). The limited frequency of tangible assistance was likely due to the nature of offering support in online forums which tend to focus on text and not on actual actions (Coulson, Buchanan, and Aubeeluck 2007).

#### **Emotional Support Online**

For individuals seeking emotional sustenance, one of the main advantages of support groups is that they allow users to pool their support resources, which is likely occurring online also (Barak and Sadovsky 2008). For example, when a member raised an emotional concern or struggle on the forum, her peers recounted their own experiences of dealing with a similar issue. Such processes can help normalize a patient's experience and provide her with a variety of coping techniques (Barak and Sadovsky 2008). Many users reported feeling ashamed and guilty about not enjoying their new role as a mother as these feelings are at odds with the expected reactions women have towards birth, babies, and motherhood. Veteran users attempted to normalize the symptoms participants experienced by helping users realize that their feelings were common.

When mothers sought support within an ISG, they reported multiple reasons for doing so—many reported lacking adequate social support, feeling isolated or misunderstood, or moving to a new area. For some users, ISGs seemed to be their sole outlet to talk with others who had experienced or were experiencing similar symptoms and circumstances. Research should focus on understanding how practitioners can better identify women who might lack traditional offline sources of support and who could benefit from online support groups.

### Informational Support Online

The Internet has become an important source for health information and ISGs exemplify this role through the form of information from lay people, who typically have personal experience with a health issue (Linares and Subrahmanyam 2012). Most ISGs offer informational support from peers (moderators and other users), who typically have no medical training; thus, a legitimate concern is the accuracy of information provided (Linares and Subrahmanyam 2012). However, we found that the information provided in the entries was not medical advice, but was more general in nature. Forum moderators also played an important role in setting a non-medical tone. The moderators of the group repeatedly emphasized that they lacked professional medical expertise, and recommended that posters seek advice from doctors on medications and utilize existing support systems within their community. For example, when new users identified themselves as struggling with PPD, moderators would often respond by directing women towards seeking professional help such as in the following response. "Have you reached out for help? It sounds like you need a ton of support for a variety of issues...Let us know if you need help finding someone in your area." By doing this they encouraged frustrated users to take an active role in their journey to recovery.

#### Benefits of PPD ISGs

Although our study confirms that public messages within PPD ISGs contain emotional and informational support, it did not examine the effect of participation on women's mental health. Participating in an online support group may lead to positive mental health outcomes because it provides users with the opportunity to share personal thoughts and feelings and fosters therapeutic ingredients such as honesty and self-disclosure (Barak and Sadovsky 2008). Extant research has not consistently examined the link between ISG participation and mental health outcomes, yet participating in such groups may promote processes related to improved mental health such as overall well-being, self-efficacy, self-confidence, and social interaction among participants. Given that volunteer-based peer support groups have been shown to reduce depressive symptoms, future

research should evaluate the efficacy of support provided within ISGs to alleviate mothers' distress and deal effectively with postpartum depression (Chen et al. 2000; Griffiths et al. 2012; Pfeiffer et al. 2011).

# Implications and Limitations of the Study

Our analysis provided a nuanced account of peer-based support provided within online forums; importantly for practitioners, moderators set a non-medical tone at all times and offered encouragement and support to users through difficult times. In the absence of evidence showing the efficacy of the support provision within such sites, it would be premature to suggest that practitioners recommend them to their patients. Nonetheless, given the concerns about the quality of online health information and support, practitioners should be reassured that the discourse did not contain medical advice and explicitly encouraged the women to seek professional help or to talk to their doctors about their concerns (Eysenbach and Diepgen 1998). Given the prevalence of PPD ISGs, and the growing comfort with technology across age groups, we recommend that clinicians explicitly ask new mothers about access to the Internet and whether they visit online support groups and if they do, discuss the extent and frequency of such access. This will help them identify women who may simply need more credible online information sources (e.g., MedlinePlus Medical Encyclopedia) and/or referrals for offline support groups. For clinicians comfortable with providing online information sources, we recommend the following sites as a starting point: the MedlinePlus Medical Encyclopedia (www.nlm.nih.gov/medlineplus/ postpartumdepression.html) and Postpartum Support International (www.postpartum.net). Likewise, frequent use of such groups may help identify women without adequate offline support and who may be at risk for PPD. Clinicians should be aware that for such women, there is also the risk that use of ISGs may lead to greater social isolation and reduced likelihood of receiving face-to-face assessment and treatment. Additionally, such patients may turn to ISGs as their source of support when in crisis; in our study, we were not able to analyze private communications, yet in our analysis of public messages, we found that moderators frequently referred women to seek professional help. Clearly, more research is needed to understand the use and efficacy of PPD ISGs and to develop informed policies and guidelines concerning their use in treatment settings.

One limitation was that we only analyzed entries from three PPD ISGs. Although we tried to sample a wider variety, we had considerable difficulty establishing contact with the ISG moderators to obtain permission; other ISGs also required group membership to retain privacy, did not allow researchers to examine their posts, or did not respond to our emails. Therefore, we cannot generalize our results to other PPD ISGs. As noted above, we only analyzed online posts and had no access to either the posters or the recipients themselves. Consequently, we were not able to determine whether participants used the site when in crisis and were also not able to verify whether participants perceived the support to be beneficial or not. Likewise, given our sample, we must infer that posters had Internet access and were comfortable using a computer. Future research should survey users of online support groups over time to assess both their perceptions about the usefulness of the support and its effect on their well-being.

#### Conclusion

In conclusion, PPD ISGs are postpartum care tools that may provide a low-cost resource for mothers to obtain social support. Our content analysis of online PPD groups revealed that they contained a wealth of peer-based support and information for women struggling with PPD; importantly, the information was non-medical in nature. Our findings suggest that online PPD groups can provide mothers with information, a community, a space to share, and may help empower them to seek professional treatment. Future research should examine the effectiveness of the support provided within these online venues.

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