



## *Online Social Support: Analysis of an Online Discussion Forum for Significant Others of Deployed Service Members*

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### **Abstract**

Military deployments can place stress on family members that can affect their physiological and psychological health. Although there has been much research on online social support in health-related groups, there is limited research on online social support in a deployment context. The researchers of this study conducted a content analysis of 151 discussion threads related to military deployments in an online forum for the significant others (SOs) of service members to examine the types of social support messages enacted between SOs. These enacted social support messages were further analyzed for each phase of the deployment cycle. Results showed that information and emotional support were the most frequent types of social support enacted by SOs during a deployment cycle. Information support was the most commonly requested type of social support during the pre-deployment and post-deployment phases, while emotional support was requested most often during the deployment phase. In response to the requests for social support, information support was the most commonly provided type of social support during the pre-deployment phase, while emotional support was the most commonly provided type of social support during the deployment and post-deployment phases.

*Keywords:* military families, deployment, social media, online social support, deployment stress

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### **Introduction**

Military deployments can place stress on family members of deployed service members that can affect their physical and psychological health (Lester et al., 2012; Meadows et al., 2017), such as elevated levels of depression and anxiety (Knobloch, Knobloch-Fedders, Yongason, 2018; Verdeli et al., 2011), poor emotional functioning (Esposito-Smythers et al., 2011), and significant somatic symptoms (Burton, Farley, & Rhea, 2009). The effects of deployment stress on military spouses has also been linked to child distress and negative health effects (Esposito-Smythers et al., 2011; Flake, Davis, Johnson, & Middleton, 2009; Lester et al., 2010; Lincoln & Sweeten, 2011; Lincoln, Swift, & Shorteno-Fraser, 2008; Verdeli et al., 2011). Conversely, parent resilience was found to be the best predictor of a child's ability to cope with deployment (Orthner & Rose, 2007). Deployed service members have also identified home-front stressors as the greatest contributing factor to their stress (Gewirtz, Erbes, Polusny, Forgatch, & DeGarmo, 2011). Since military family members are oftentimes geographically separated from strong-tie networks such as family members, the availability of social support through weak-tie networks such as those found in online discussion forums, may be salient in mitigating the negative effects of deployment stress. Online social networks have been shown to be a viable, useful resource for patients seeking social support for an illness (Braithwaite et al., 1999; Eichhorn, 2008; Nicholas et al., 2009). However, there is limited research on how social support is enacted in online forums that could potentially help family members of deployed service members cope with the stressors of deployment.

The US Department of Defense has developed formal programs to assist military families in coping with the stress of deployment (Blaisure et al., 2012). Additionally, service members and their spouses use a variety of informal resources such as family, religious institutions, and neighbors for support (Blaisure et al., 2012). Informal networks can also include "weak ties," which are relationships that may interact frequently with each other but are not considered close personal connections (Rains & Keating, 2011; Wright & Miller, 2010). A major advantage of computer-mediated social support is that it is available twenty-

four hours a day, seven days a week (Eastin & LaRose, 2005; Walther & Boyd, 2002). Because online discussion groups are asynchronous, individuals can participate at a time that is convenient to them. For military family members who are oftentimes geographically dispersed, online networks may serve as invaluable resources for social support in a weak-tie network manner.

The objective of this study was to examine how social support is enacted in an online discussion forum for the significant others (SOs) of deployed US service members across the deployment cycle (Laser & Stephens, 2011). It examines the types of social support that SOs request during the deployment and the types of social support provided by other SOs in response. This study used Granovetter's (1973) weak-tie network theory as the theoretical framework to examine the enactment of online social support. Cutrona and Suhr's (1992) social support categories provided the framework for coding the data.

### **Literature Review**

#### *Stress and deployment*

There are unique stressors to each of the three phases of the deployment cycle (Blaisure et al., 2012; Laser & Stephens, 2011). The first phase of the deployment cycle is the pre-deployment phase, which starts when the service member is notified of the deployment and continues until the service member departs. In a study of the impact of combat-related deployments on families with pre-school aged children, non-deployed spouses reported feeling high anxiety about parenting alone, stress about how to tell the children, and emotional withdrawal from deploying spouses (Waliski, Bokony, & Kirchner, 2012). Although the non-deployed spouses received a plethora of information about the deployment and available resources from official military sources, it was too much information at once. Online social support networks have the advantage of providing support as needed or desired to minimize information overload (White & Dorman, 2001).

The second phase of the deployment cycle is the deployment phase, which begins when the service member leaves until their return home. Stressors for non-deployed spouses during this phase of the deployment include renegotiation of boundaries, caring for children alone, and maintaining relationships with deployed spouses while apart (Blaisure et al., 2012). Both deployed service members and non-deployed spouses have noted that this phase of the deployment cycle was hardest on non-deployed spouses (Waliski, Bokony, & Kirchner, 2012). Non-deployed spouses also reported feeling isolated, alone, and needing more support services during the deployment (Waliski, Bokony, & Kirchner, 2012). They may also feel a sense of abandonment, loss, emptiness, pain, and disorganization (Laser & Stephens, 2011).

The final phase of the deployment cycle is the post-deployment phase. During this time, non-deployed spouses may experience positive feelings such as joy and relief, but may also experience annoyance, anxiety, and stress as they adapt to the changes in roles and responsibilities once their deployed spouse returns home (Blaisure et al., 2012; Palmer, 2008). Non-deployed spouses may experience stress related to negotiating parenting roles, household roles, and their newly established independence (DeVoe & Ross, 2012).

Although research has shown that social support can help to mitigate stress and the resulting health issues (Merolla, 2010), there is no existing research that explores how spouses commutatively cope with these stressors using computer-mediated social support in an online forum.

### *Social support*

Greater social connectedness can have a significant impact on an individual's health and well-being. Social connectedness has been positively associated with lower psychological distress and fewer health symptoms amongst military spouses (Crouch, Smith & Segal, 2017). Social support is a very important resource for military spouses to help cope with deployment stress (Chapin, 2011; DeVoe & Ross, 2012; Huebner, Mancini, Bowen, & Orthner, 2009; Merolla, 2010; Trautmann, K-Ho & Gross, 2018). Goldsmith (2004) describes how enacted support occurs in the context of conversation through an exchange of messages that individuals perform to help each other. The three types of enacted social support typically described in research are emotional, informational, and tangible support (Goldsmith, 2004; Fisher, 2008). However, scholars have developed additional categories of social support, such as esteem and network support, that have been included in various versions of social support behavior coding schemes (Bambina, 2007; Braithwaite, Waldron, & Finn, 1999; Cutrona & Suhr, 1992).

Cutrona and Suhr's (1992) social support behavior codes have often been used in studies of enacted social support in computer-mediated groups for people with disabilities and diseases such as HIV (Bambina, 2007; Braithwaite et al., 1999; Coursaris & Liu, 2009). The categories of social support include: emotional support, informational support, esteem support, network support, and tangible support. The frequency of tangible support in past studies has been low in both face-to-face and online forums (Bambina, 2007; Braithwaite et al., 1999; Cutrona & Suhr, 1992). As a result, Bambina (2007) did not include it in her study of an online cancer forum.

### *Online weak-tie networks and social support*

Computer-mediated social media provide ideal channels for connecting individuals experiencing stressors, such as military spouses, in powerful informal social networks that operate across time and distance (Kim & Kreps, 2014; Kim, Kreps, & Shin, 2015). Some of these informal social networks consist of "strong ties." Strong ties are individuals with whom one has a close relationship such as family and friends (Wright, Rains, & Banas, 2010). Social networks can also consist of "weak ties," which are individuals who are not interpersonally close such as co-workers, service providers, and community group members (Rains & Keating, 2011; Wright & Miller, 2010).

Granovetter's (1983) weak-tie network theory offers a useful theoretical framework for examining informal online social support. The theory explains how weak ties are indispensable for individuals seeking support and integration into supportive communities. Online weak-tie networks also offer the opportunity for dissemination of informational support to a larger number of people in comparison to traditional in-person strong-tie networks alone (Wright & Miller, 2010).

### *Advantages of online weak-tie networks*

There are several dimensions that influence an individual to prefer weak-tie support to strong ties: 1) access to different viewpoints, 2) reduced risk, 3) accessibility, and 4) availability of support (Eastin & LaRose, 2005; Walther & Boyd, 2002; Wright et al., 2010; Wright & Miller, 2010; Wright & Bell, 2003). Online communication allows military spouses to connect with other military spouses who have been through deployment before for information and support (Rea, Behnke, Huff & Allen, 2015).

**Access to different viewpoints.** Strong-tie networks may be unable to provide effective informational support due to limited relevant experiences and personal knowledge (Rains & Keating, 2011). On the other hand, weak-tie network connections can often provide more relevant information and diverse points of view than strong-tie networks (Wright & Bell, 2003; Wright & Miller, 2010).

In addition to providing informational support, weak-tie networks are also a great source of emotional support (Colineau & Paris, 2010; Wright & Bell, 2003). People often chose weak-tie networks because of the network members' abilities to understand their experience and the emotional distance afforded by the online communication (Colineau & Paris, 2010). In contrast, military spouses reported that when strong tie networks, such as extended families, stepped in to help during deployment, it sometimes caused additional stress instead of being helpful because family members did not understand or have the experience of living the military life or going through a military deployment (Waliski, Bokony, & Kirchner, 2012).

Because weak-tie connections usually had similar deployment experiences, military spouses often preferred support from these individuals (Rosen & Moghadam, 1990). For spouses of geographically dispersed Guard and Reserve members, these online social networks are especially salient. Spouses felt that only someone who had been through the same experience could truly understand what they were going through (Lapp et al., 2010; Trautmann, K-Ho, & Gross, 2018). Military spouses who had young children during military deployment, valued strong social networks within the military and ranked them higher in importance than their immediate families because they felt that they would better understand the challenges they were facing in the care of their children during deployment (Trautmann, K-Ho, & Gross, 2018).

**Anonymity and confidentiality.** Reduced risk offers another reason to prefer weak-tie support. Weak-tie support through online social networks offers its members the protections associated with anonymity (Wright & Bell, 2003). People can seek support without fear of being judged or labeled. Anonymity also precludes embarrassment, allowing people to say personal things they may otherwise not (Walther & Boyd, 2002). Also, because of the potential for social stigma associated with health and illness, weak-tie networks provide opportunities for reduced risks when seeking social support in comparison to strong-tie networks (Wright, Rains, & Banas, 2010).

However, not all weak-tie networks are valued the same in regard to social support. The military community offers formal online support forums. Despite the ability to create a pseudonym or select an image other than a personal photo to participate in an online network, military spouses may not choose the military community as their first line of support because of concerns about confidentiality (Trautmann, K-Ho, & Gross, 2018).

**Accessibility and availability.** Accessibility to social support for those who have limited mobility due to illness is another advantage to online social networks (Brathwaite et al., 1999). Similarly, military families, who are not near a military installation (e.g., families of Guard and Reserve), may have limited access to face-to-face social support programs that are regularly available on military bases. Computer-mediated social support via online informal social networks, may be their best option for obtaining social support whenever they need it, regardless of location (Eastin & LaRose, 2005; Walther & Boyd, 2002).

### Research Questions

Online mediated discussion forums are examples of weak-tie social networks, where social support is enacted through discussion posts by participants who may only know each other through their online connection. Goldsmith's (2004) review of studies on enacted support included recommendations for further research about specific types and sources of

support for particular life stressors. Using the weak-tie network theory, this study examined the enactment of social support in an online social network of significant others (SOs) of service members during deployment. It also examined the enactment of social support across the phases of deployment, through the following research questions:

**RQ1:** What are the types of social support messages enacted in an online discussion forum for SOs of deployed service members between SOs requesting support and SOs providing social support?

**RQ2:** What types of social support are requested during each phase of the deployment cycle?

### **Methods**

This study applied a quantitative design, using the content analysis method, to examine the enactment of social support in an online mediated discussion forum created for military wives. A search of Yahoo Groups and a Google search was conducted using the following keywords: military spouses, discussion boards, and deployment. One site found was a discussion board for military wives called Truu Military Wives Confessions (Beta); Truu was a grassroots effort by a military wife to create an online forum where military wives could vent or connect with other military spouses experiencing similar issues. However, girlfriends, and fiancés also participated in the discussion board. The analysis focused on discussion threads from the discussion group on deployments. While there are currently many military spouses who are male and married to female active duty members, as well as same-sex couples with one member in the military, participants in this forum were predominantly female spouses of male active duty members.

A discussion board is a mediated, online social networking platform where members can post a message. A participant can post a unique message to start a discussion thread that other participants can respond to. Discussion boards are typically moderated and require participants to register in order to post to the discussion board. However, anyone may view the posts without registering. The discussion board was a grassroots effort and had no affiliation to any formal government entity.

A review of the entire census of discussion threads on the analyzed site, consisting of 1,552 discussion threads, was conducted to find discussions specifically dealing with deployment. A total of 151 discussion threads were identified. All of the threads were dated from May 2008 to January 2013 at the time of analysis.

#### *Unit of analysis*

The unit of analysis was the individual discussion thread, which included the initial message by the original poster, responses to original posts by participants in the online forum, and messages by the original poster to the respondents. Each discussion thread was assigned an identification number and coded in its entirety. Although many studies on online social support have coded each individual post, this study's approach was to code the enacted social support messages within the context of the whole discussion thread. According to Goldsmith (2004), the frequency of enacted social support does not determine the recipient's evaluation of the social support to be effective. Thus, the frequency of enacted support as measured in past studies by coding every single post is not salient to this study. Rather, the entire encounter, which consists of the type of social support requested and the type of social support enacted in response to the requests are the focus and unit of analysis for this study. For example, if three respondents each provided emotional social support, then only one instance of emotional social support was coded for the entire discussion thread.

### *Codebook and coding scheme*

The codebook consisted of three categories: descriptive information, type of social support requested, and type of social support provided in response to the requested. The coding scheme for enacted social support is an adapted version of Cutrona and Suhr's (1992) social support behavior codes: information support, tangible assistance, network support, esteem support, emotional support, and their associated subcategories. The final coding scheme excluded some of the subcategories of emotional support (i.e., relationship, physical affection, confidentiality, prayer) because of their non-applicability to an online forum. This study also excluded the tangible support category from its coding scheme. Because this is an online discussion forum consisting of participants from different geographic regions, tangible assistance where the sender takes physical action to support a recipient or physical contact between participants is very rare (Bambina, 2007).

A pilot test using 20% of the discussion threads was conducted using the adapted social support coding schemes for both "requested" and "provided" social support. A second pilot test was conducted with a research assistant, to confirm the applicability of the coding scheme to the discussion forum to be studied as well as to clarify confusion with any of the subcategories. After final review, the coding scheme for "requested" and "provided" social support was developed with examples of each category/subcategory that reflected the online discussion forum being studied. ReCal2 (Freelon, 2010) was used to determine intercoder reliability. ReCal 2 is an online tool that calculates "intercoder/interrater reliability coefficients for nominal content analysis data coded by two coders" (Freelon, 2010). These reliability coefficients include percent agreement, Scott's Pi, Cohen's Kappa and Krippendorff's Alpha. Once data files are formatted per ReCal2 requirements, the file can be uploaded and calculated by selecting the "Calculate reliability" button.

A codebook that included the coding schemes was developed; it provided a comprehensive guide for all coding decisions. The codebook contained the social support coding schemes as described above with examples of each of the categories.

### *Coding*

There were two coders for this study. All coding was done independently with at least 20% overlap for the reliability test. Approximately 20% of the full sample was selected to assess for intercoder reliability. The general guideline for subsample size in reliability assessment in social science research is 10% to 20% of the total sample (Neuendorf, 2002). According to Keyton (2006), intercoder reliability should be conducted when two or more coders are assigning communication behaviors to categories. ReCal 2 (Freelon, 2010) was used to determine reliability on each variable. Intercoder reliability was calculated for all subcategories. The percent agreement for all was approximately 90%. A reliability coefficient of .70 or above is acceptable for establishing intercoder reliability (Keyton, 2006).

Chi-square tests of independence were performed to determine: 1) if there was a statistically significant association between the enactment of social support between SOs requesting support and SOs providing social support (RQ1); and 2) if there was a statistically significant association between the enactment of social support and phase of deployment (RQ2). A p-value less than 0.05 indicated significance. Although each of the social support categories had numerous subcategories, the main category was used for the calculations. All analyses were performed using SPSS version 23 for Windows (IBM Corp., Armonk, NY).

### **Results**

A content analysis of 151 discussion threads that related to military deployment was conducted. Table 1 (below) shows the demographics of the posters for the 151 discussion threads. A

majority (84.1%) of the original posters (i.e., requestors of social support) were military spouses, followed by fiancé's (7.3%), and girlfriends (2.7%). Most of the original posters were in the pre-deployment (25.8%) and deployed (64.9%) phases, with only a few in the post-deployment phase (5.3%).

Table 1 *Descriptive statistics for original poster requesting support*

	N	%
<b>Original Poster</b>		
Spouse	127	84.1%
Girlfriend	4	2.7%
Fiancé	11	7.3%
Unable to tell	9	6.0%
<b>Phase of Deployment</b>		
Pre-deployment	39	25.8%
Deployed	98	64.9%
Post-deployment	8	5.3%
Unable to tell	6	4.0%

*RQ1 analysis of results: Frequency of social support messages*

RQ1 examined the types of social support enacted in an online discussion forum for SOs of deployed service members between SOs requesting support and SOs providing social support. A content analysis of 151 discussion threads relating to military deployment was conducted using Cutrona and Suhr's (1992) social support behavior codes as the framework.

**Social support requested.** The requests for social support in each discussion thread were categorized into one or more of the following social support categories: information support, esteem support, network support, or emotional support. The requests were coded by subcategory, and then the frequencies were added to obtain the larger category total. Although there were 151 discussion threads, the instances of social support requested was 193 since, oftentimes, more than one type of social support was requested in a single thread. The categories and subcategories of social support requested along with their frequencies and percent based on the total instances of social support requested (n=193) are presented in Table 2 (next page).

Table 2 *Frequency distribution of enacted social support by subcategories of social support*

Support Categories	Requestors		Providers	
	N	%	N	%
<b>Information Support</b>	<b>95</b>	<b>49</b>	<b>154</b>	<b>38</b>
Advice/Suggestion	90	46	111	27
Referral	1	.5	24	6
Situation appraisal	4	2	17	4
Teaching	0	0	2	.5
<b>Esteem Support</b>	<b>4</b>	<b>2</b>	<b>25</b>	<b>6</b>
Compliment	1	.5	6	1.4
Validation	3	1.5	13	3
Relief of blame	0	0	6	1.3
<b>Network Support</b>	<b>13</b>	<b>7</b>	<b>57</b>	<b>13</b>
Access	9	5	13	3
Presence	1	.5	28	6
Companions	3	1.5	16	4
<b>Emotional Support</b>	<b>81</b>	<b>42</b>	<b>176</b>	<b>43</b>
Sympathy	9	5	13	3.4
Understanding/empathy	55	28	94	23.1
Encouragement	17	9	69	16

*The chi-square statistic is 14.5993. The p-value is .002193. The result is significant at the 0.01 level.*

Information support (49%) was the most requested type of social support. The subcategory advice/suggestion was the most requested type (46%) followed by situation appraisal (2%) and referral (.5%). The second most requested category of social support was emotional support (42%). Understanding and empathy support messages were the most frequently enacted types of emotional support (28%), followed by “encouragement” (9%), and sympathy (5%). Network support ranked third in the type of support requested (7%). Of those enacted messages, the most requested subcategory of network support was access (5%), followed by companions (1.5%), and finally, presence (.5%). Esteem support (2%) was the least requested support with request for validation (1.5%) and compliment (.5%). The most requested subcategory of the esteem support category was validation (1.5%) followed by compliment (.5%). There were no requests categorized under relief of blame. A description of each social support behavior code and examples of “requested” social support is presented in Table 3 (next page).

**Social support provided.** Each discussion thread consisted of one to several responses to the original post. Each discussion thread may have more than one type of social support or even several instances of the same type of social support (e.g., information support). However, if a specific category of social support was enacted, even more than once, it was coded only one time for that discussion thread.

The categories and subcategories of social support, provided along with their frequencies and percent based on the total number of instances of social support provided (n=412) are listed in Table

2 (previous page). The category of social support most provided by the respondents was emotional support (43%). The subcategory of emotional support most provided was understanding/empathy (23%), followed by encouragement (17%), and sympathy (3%). The second category of social support most provided by respondents was information support (37%,).

Table 3. *Definitions of Cutrona e3 Subr's (1992) Social Support Behavior Code and examples of "requested" social support.*

Support Type	Purpose of Communication	Example
<b>Informational support</b>		
Suggestion/advice	Asks for ideas or advice.	<i>Any advice on how to handle this situation?</i>
Referral	Asks for others sources of help like military agencies.	<i>Do you know of a resource that can help children during deployment?</i>
Situation appraisal	Request respondents to reassess or redefine the situation	<i>Should I be looking at this deployment in a different way?</i>
Teaching	Seeks information, facts, or news about the situation or about skills needed to deal with the situation	<i>Can you tell me how to contact my deployed spouse in case of emergency?</i>
<b>Esteem Support</b>		
Compliment	Says positive things about the recipient or emphasizes the recipient's abilities	<i>You will make it through this. You have shown a lot of strength through this so far.</i>
Validation	Seeks agreement with her perspective on the situation	<i>Do you think that these feelings are normal?</i>
Relief of blame	Tacitly seeks to have the respondent alleviate the recipient's feelings of guilt about the situation	<i>Maybe I shouldn't have said that to him.</i>
<b>Network support</b>		
Access	Seeking to meet new friends online.	<i>I joined this discussion forum hoping to meet new friends</i>
Presence	Seeks time to spend with respondents.	<i>Is anyone available to chat about this?</i>
Companions	Reminds the person of availability of companions, of others who are similar in interests or experience	<i>Don't forget that we're here for you. We've all been through this before and can help.</i>
<b>Emotional support</b>		
Sympathy	Tacit request for sorrow or regret for their situation or distress	<i>This is the toughest thing I've ever done.</i>
Understanding/empathy	Seeks respondents to express understanding of the situation or to share a personal situation that communicates understanding	<i>Has anyone else had these feelings?</i>
Encouragement	Asks the respondents for hope and confidence	<i>This has been really tough for me. Does anyone have words of encouragement?</i>

The subcategory of information support most provided was advice/suggestion (27%), followed by referral (6%), situation appraisal (4%), and teaching (. 5%). The third category of social support most provided by respondents was "network" support (13%). The most requested subcategory of network support was "presence" (6. 2%), followed by "companions" (4%), and finally "access" (3.2%). Esteem support (6%) was the least provided social support. The most provided subcategory of "esteem" support was "validation" (3%); the subcategories "relief of blame" (1%) and "compliment" (1%), were enacted equally. A description of each type of social support behavior code and examples of "provided" social support is presented in Table 4 below.

Table 4 *Definitions of social support behavior codes based on Cutrona & Subr's (1992) Social Support Behavior Codes and examples of "provided" social support.*

Support Type	Purpose of Communication	Example
<b>Informational support</b>		
Suggestion/advice	Offers ideas and suggests actions	<i>Have you thought about taking a class or taking up a new hobby to keep your busy during the deployment? It will make the time go quicker.</i>
Referral	Refers the recipient to some other source of help	<i>You should call your Family Readiness Officer for some help.</i>
Situation appraisal	Reassesses or redefines the situation	<i>Many of us go through the same feelings that you're experiencing,</i>
Teaching	Provides detailed information, facts, or news about the situation or about skills needed to deal with the situation	<i>The family readiness officer has the most up to date information on the unit and can help you with some of the challenges that you're facing during the deployment.</i>
<b>Esteem Support</b>		
Compliment	Says positive things about the recipient or emphasizes the recipient's abilities	<i>You will make it through this. You have shown a lot of strength through this so far.</i>
Validation	Expresses agreement with the recipient's perspective on the situation	<i>I know what you mean about missing your husband during the deployment. It's really tough sometimes.</i>
Relief of blame	Tries to alleviate the recipient's feelings of guilt about the situation	<i>It's not your fault. There's nothing you could have done about it.</i>
<b>Network support</b>		
Access	Offers to provide the recipient with access to new companions	<i>I have some friends that live in your area. I can introduce you to them if you'd like. Their husbands are deployed too. It might be nice if you could get together.</i>
Presence	Offers to spend time with the person, to be there	<i>Message me anytime if you want to talk.</i>
Companions	Reminds the person of availability of companions, of others who are similar in interests or experience	<i>Get connected with the other spouses in your unit and be sure to join the unit activities. It may help you a lot.</i>
<b>Emotional support</b>		
Sympathy	Expresses sorrow or regret for the recipient's situation or distress	<i>I'm sorry that you have to go through this alone.</i>
Understanding/empathy	Expresses understanding of the situation or discloses a personal situation that communicates understanding	<i>I totally understand how you feel. I remember going through a similar situation during my husband's first deployment.</i>
Encouragement	Provides the recipient with hope and confidence	<i>I know that you'll make through the deployment. You are stronger than you realize. Hang in there!</i>

**Statistical Significance.** A chi-square test of goodness-of-fit was performed to determine whether the four categories of social support were equally provided. The results of the chi-square test ( $\chi^2(3, N = 412) = 156.602, p < 0.001$ ) clearly show that information and emotional support were significantly more likely to be provided in an online social support forum for significant others of service members. Results also show that network and esteem support were less likely to be provided in the same online forum.

The results of the chi-square test of independence indicated that there was a statistically significant association between the enactment of social support in an online discussion forum for SOs

of deployed service members and role of SOs (social support providers vs. social support requestors) ( $\chi^2(3, N = 605) = 14.599, p = 0.002$ ).

Since the result of the chi-square test of independence was significant, pairwise comparisons were performed to determine whether there was an association between type of support and role of SOs in the pairwise comparison of social support categories. The Bonferroni correction for pairwise comparisons was applied, and thus, a p-value  $< 0.0083$  ( $0.05/6 = 0.0083$  since there were 6 pairwise comparisons) indicated significance. The results of pairwise comparisons (Table 5 next page) suggest that when looking at only information support and emotional support, there was a statistically significant association between type of support and role of SOs ( $\chi^2(1, N = 319) = 9.355, p = 0.002$ ). In this pairwise comparison, social support requestors were more likely to enact (i.e., request) information support than social support providers (88% vs. 73%). There was no statistically significant association between type of support and role of SOs, when looking at esteem and network support.

Table 5. *Results of pairwise comparisons*

Support Categories	Requestors	Providers	$\chi^2$	p
Information support	95 (96.0)	154 (86.0)	6.722	0.010
Esteem support	4 (4.0)	25 (14.0)		
N = 278				
Information support	95 (54.0)	154 (46.7)	2.454	0.117
Network support	81 (46.0)	176 (53.3)		
N = 506				
Information support	95 (88.0)	154 (73.0)	9.355	0.002*
Emotional support	13 (12.0)	57 (27.0)		
N = 319				
Esteem support	4 (4.7)	25 (12.4)	3.919	0.048
Network support	81 (95.3)	176 (87.6)		
N = 286				
Esteem support	4 (23.5)	25 (30.5)	0.329	0.566
Emotional support	13 (76.5)	57 (69.5)		
N = 99				
Network support	81 (86.2)	176 (75.5)	4.502	0.034
Emotional support	13 (13.8)	57 (24.5)		
N = 327				

*Note: Using the Bonferroni correction for pairwise comparisons, a p-value  $< 0.0083$  indicated significance.*

*Analysis results of RQ2*

RQ2 aimed to determine the frequency of distribution for enactment of social support requested and provided during each phase of the deployment, and to also determine if there was a statistically significant association between the enactment of social support and phase of deployment. Table 6 (next page) shows the frequency distribution of enacted social support by deployment phase. For the 193 social support requests, nearly two-thirds (64.8%) were made during the deployment phase of the cycle. Information support was the most commonly requested type of social support during pre-deployment (65.4%) and post-deployment (60%). Emotional support was requested most often during the deployment phase (48.8%).

Of the 412 social support messages provided, nearly two-thirds (66.3%) occurred during the deployment phase. Information support was the most commonly provided type of social support during pre-deployment (43.2%), while emotional support was the most commonly provided type of social support during deployment (44.7%) and post-deployment (52.9%).

Table 6. *Frequency distribution of enacted social support by deployment phases*

Support Categories	Pre-deployment		Deployment		Post-deployment		Unable to Tell	
	N	%	N	%	N	%	N	%
<b>Social Support Requested</b>	<b>52</b>	<b>26.9</b>	<b>125</b>	<b>64.8</b>	<b>10</b>	<b>5.2</b>	<b>6</b>	<b>3.1</b>
Information Support	34	65.4	51	40.8	6	60.0	4	66.7
Esteem Support	1	1.9	3	2.4	0	0	0	0
Emotional Support	15	28.8	61	48.8	4	40.0	1	16.7
Network Support	2	3.8	10	8.0	0	0	1	16.7
<b>Social Support Provided</b>	<b>111</b>	<b>26.9</b>	<b>273</b>	<b>66.3</b>	<b>17</b>	<b>4.1</b>	<b>11</b>	<b>2.7</b>
Information Support	48	43.2	93	34.1	6	35.3	7	63.6
Esteem Support	4	3.6	20	7.3	1	5.9	0	0
Emotional Support	41	36.9	122	44.7	9	52.9	4	36.4
Network Support	18	16.2	38	13.9	1	5.9	0	0

As the sample size for post-deployment was small [N = 10, with no responses to two types of support (network support and esteem support)], chi square analysis including only 2 deployment phases (i.e., pre-deployment vs. deployment) was conducted to determine whether types of enactment of social support requested and provided were different between the two specific deployment phases. The analysis results suggested that there was a statistically significant association between the enactment of social support requested and phase of deployment ( $\chi^2(3, N = 177) = 8.999, p = 0.028$ ). The results indicated that during pre-deployment, information support (65.4%) was more likely to be requested, while during deployment, emotional support (48.8%) was more likely to be requested. There was no statistically significant association between the enactment of social support provided and phase of deployment ( $\chi^2(3, N = 384) = 4.962, p = 0.177$ ).

### Discussion

Previous research has demonstrated the value of social support via online forums for various health-related conditions (Braithwaite et al., 1999; Bambina, 2007; Colineau & Paris, 2010; Coursaris & Miu, 2009; Nicholas et al., 2009). However, there is limited research on the enactment of social support in an online forum for the significant others of service members during a military deployment. The aim of this study was to examine the enactment of social support in an online discussion forum for the significant others of deployed service members between SOs requesting social support and those SOs providing social support. The study also aimed to examine the frequency of distribution in the enactment of social support during the different phases of deployment as well as the presence of a statistically significant association between the enactment of social support and phase of deployment.

### *Enacted social support messages*

The analysis of the data indicated that social support was enacted between requestors and providers based on Cutrona and Suhr's (1992) social support behavior codes. Information and emotional support were the most frequently requested types of social support as well as the most frequently provided types of social support. SOs may have only requested information support; however, both information and emotional support were usually provided in response. Some SOs requested multiple types of social support and received matching social support plus additional responses from other categories of social support. Network and esteem support were requested and provided less frequently. Similar results were found in online support groups for those dealing with specific health issues (Braithwaite et al., 1999; Bambina, 2007; Colineau & Paris, 2010; Coursaris & Miu, 2009; Nicholas et al., 2009). Like the results of this study, information and emotional support were the most enacted types of social support in these online forums.

Online weak-tie networks are important sources of social support for military spouses of deployed service members. Online social networks are not only advantageous for the ease of access to social support that is available to participants, but also for the valuable links to formal support services they often facilitate. Examples of the resources shared included Military OneSource, Family Readiness Groups (FRG), Family Support Center, a chaplain, Military Family Life Counselors (MFLC), Camp C. O. P. E., and Tricare. Although information on these formal resources can be found on military-sponsored websites, having them recommended by opinion leaders in a grassroots forum such as this, may provide a level of endorsement that makes the referrals more acceptable to fellow military SOs.

### *Online social support by phase of deployment*

An analysis of the data by deployment phase indicates that during the pre-deployment phase, information support was enacted most frequently followed by emotional support. SOs were most interested in finding out information about deployment such as how to cope with deployment and what to expect. In the deployment phase, emotional support was enacted most frequently followed by information support. The frequencies of enacted social support were low during the pre-deployment phase and then increased during the deployment phase. These findings are further supported by a study of non-deployed military caregivers where the caregivers reported good emotional well-being in the pre-deployment phase, but greater stress during the deployment phase (Lara-Cinisomo et al., 2012). Findings for the post-deployment phase showed a marked decrease in the enactment of social support. Blaisure et al. (2012), described this post-deployment phase when the service member first returns home as a "honeymoon" period that precedes the later challenges of reintegrating into the daily family routine.

### **Limitations**

This study used a convenience sample of SOs who participated in an online discussion forum for military wives. One limitation relates to the ability to generalize study results to all the branches of services. Although the study examined posts from SOs across branches, it was not always possible to determine which branch of service their service member belonged to. Each branch of service is unique in its culture, mission, and deployments. Future studies should specifically consider branch of service to understand adaptive communication behaviors and deployment issues unique to their population. Another limitation was the inability to track individuals across the different phases of the deployment cycle. SOs randomly participated in the forum. Following them through each phase of the deployment cycle would provide greater insight into the types of stress they experienced and type of social support they needed.

Finally, this study only examined one online discussion forum that predominantly consisted of female SOs. There are many other social media platforms where SOs are communicating such as private Facebook groups, Instagram, and Twitter, just to name a few. There are also platforms for different groups such as male spouses of active duty service members, SOs of same sex couples, dual military couples and family members of deployed single service members. A comprehensive examination of social support across different social media platforms and across groups, should be considered for a more comprehensive understanding of social support communication during deployment.

#### *Future Research*

Future studies should also employ methodologies that allow for data collection longitudinally throughout the three phases of deployment, following individual military spouses or a group of military spouses in a deployed unit. Ideally, participant posts should be tracked and analyzed through each phase of deployment, followed by an interview with each participant to gain a better understanding of their evaluation of the support and how it affected their health and wellbeing. Additionally, previous research (Esposito-Smythers et al., 2011; Lester et al., 2012; Verdelli et al., 2011) has demonstrated that deployment stress can affect the health of family members. Tracking stress levels and health indicators across the deployment cycle in addition to enacted social support could provide valuable insights for developing evidence-based interventions to mitigate health issues associated with deployment stress.

Interestingly, the statistical analysis showed an association between the enactment of social support requested and phase of deployment, (pre-deployment and deployment), but no association between social support provided and phase of deployment. This finding lends itself to examination of stress and social support through Cutrona and Suhr's (1992) Optimal Matching Model of Stress and Social Support framework. According to this model, social support is most effective when matched with a specific type of stressful event (Cutrona and Russell, 1990). Controllability is the strongest influence in determining social support needs (Turner, Grube, & Myers, 2001). Uncontrolled life events, where the individual is not in control of the situation, require emotional and network support also known as nurturant support. The goal is to assist the person with handling stress without eliminating the stressor. For example, in an instance when the individual has control over the situation, they may require more informational and tangible support. This is known as action-facilitating support, where the purpose is to assist the individual in handling an issue. Research using this framework can provide insight and further evidence regarding stress and controllability during each phase of the deployment cycle, and the associated social support required.

Finally, although this study has demonstrated the availability of online social support, further research needs to be done to determine if virtual support is enough to mitigate deployment stress. Qualitative studies may further reveal options such as a hybrid intervention program that combine online social support with physical social support.

#### **Conclusion**

This study is the first to examine enacted social support in an online discussion forum for SOs of deployed service members across the deployment cycle using quantitative methods. The findings emphasize the strength of weak-ties network theory for online social support. The results also extend previous research of enacted social support online for groups with special health conditions (Braithwaite et al., 1999; Bambina, 2007; Colineau & Paris, 2010; Coursaris & Miu, 2009; Nicholas et al., 2009) to SOs needing social support during a military deployment. The findings from this study will enable the development of evidence-based programs and channels of communication for military families during deployment. By understanding the enactment of social support across deployment,

specific programming needs can be developed for each phase of deployment in order to address the stressors unique to each phase and empower SOs to manage stressors as they arise.

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