STAYING CONNECTED ON THE HOME FRONT: COMMUNICATION AND WELL-BEING OF CIVILIAN SPOUSES DURING DEPLOYMENT

By

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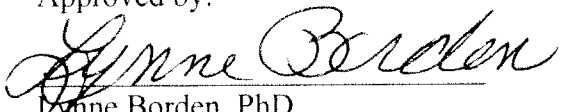

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Abstract

In this study, I examined the associations of communication frequency via asynchronous (i.e., email/internet, postal mail) and synchronous communication methods (i.e., commercial telephone, DSN telephone, military exchange provided phone, military video phone, and video teleconference) as associated with marital quality and psychological well-being in civilian wives during their service member husbands' deployment (N = 2,230). I used a relational dialectics perspective to suggest that the relationship between communication frequency and well-being would be curvilinear such that increased communication frequency is beneficial up to a point where it then becomes detrimental for well-being. I found this curvilinear relationship for synchronous communication methods and marital quality, but synchronous communication was not significantly associated with psychological well-being. For asynchronous communication, although I expected curvilinear effects I found a positive linear relationship for both marital quality and psychological well-being. Overall, this study suggests that increased communication is not always better for well-being of civilian spouses during deployment periods.

According to the Department of Defense (2010), approximately 2.4 million men and women are currently serving in the U.S. military, and most of these service members are married. During periods of frequent deployment like those recently experienced during the wars in Afghanistan and Iraq, these military couples may face difficult challenges. Still, most research on the impacts of deployment has focused on the health and well-being of the military service member, exploring issues like PTSD with little attention to the well-being of the civilian spouse (Hoge, Auchterlonie, & Milliken, 2006; Hoge et al., 2004; Tanielian & Jaycox, 2008). The relatively limited research that does address spouses of service members suggests that although most are resilient (Wiens & Boss, 2006), the deployment periods are particularly challenging; spouses of service members report more stress during deployment than national samples (Flake, Davis, Johnson, & Middleton, 2009, Lester et al., 2010). Deployments are also associated with more mental health doctor visits and mental health diagnoses for army wives (Mansfield et al., 2010), including major depressive disorder and generalized anxiety disorder (Eaton et al., 2008). Further, deployment extensions may exacerbate mental health problems such as feelings of loneliness, depression, and anxiety (SteelFisher, Zaslabsky, & Blendon, 2008).

Spouses may find some relief through being able to communicate with their service members during deployment. Some researchers suggest that communication is essential in relational maintenance and emphasize the importance of frequent and routine communication during stressful periods (Canary & Stafford, 1992; Ledermann, Bodenmann, Rudaz, & Bradbury, 2010; Merolla, 2010). In fact, communication has been identified as an important coping mechanism throughout deployment (Maguire & Sahlstein, 2009). Assurances like declarations of love and plans to communicate in the future are primary relational maintenance strategies during deployment (Kim et al., 2005). Focusing on one's marital relationship and frequent

communication with one's spouse may reduce stress (Maguire & Sahlstein, 2009; Mansson, Boothbutterfield, & Birmingham, 2011).

Still, increased levels of communication may not always be associated with improved well-being. Greene, Buckman, Dandecker, and Greenberg (2010) proposed that though increased communication is generally associated with better mental health of service members, too much contact may be a distraction and adversely affect unit cohesion, occupational effectiveness, and morale among service members. Similarly, Warner et al. (2007) found that increased connectivity with the home front may be correlated with increased stress for both the soldier and the family. Thus, excessive amounts of contact may not only be harmful for service members, but may also negatively impact their partners. A relational dialectics perspective helps to explain why increased communication may not always be associated with reduced stress or improved well-being.

Relational dialectics theory suggests that relationships are characterized by and experienced through the negotiation of contradictions. These contradictions are opposing yet unified needs or desires such as the need for autonomy and independence as well as relational connectedness (Baxter & Montgomery, 1996). For example, while the service member is deployed he or she is both physically absent and psychologically present (Wiens & Boss, 2006). The civilian spouse must develop a new sense of independence and establish new routines to adjust to managing the day-to-day responsibilities without the spouse, yet still maintain a stability and connectedness with the spouse (Burrell, Adams, Durand, & Castro, 2006; Wood, Scarville, & Gravino, 1995). Both independence and connectedness are important to the well-being of the individual and the family but they are also in conflict with one-another. The spouses must tactfully negotiate these contradictions to find a balance between their opposing needs.

Sahlstein, Maguire, and Timmerman (2009) used this theory as a framework while interviewing 50 Army wives and identified the contradictions within their relationships with active duty spouses. The authors discovered that during deployment periods, civilian wives must face the contradiction between autonomy and connection. In other words, during deployment wives must simultaneously "live their own lives" by taking on the responsibilities of their absent spouses yet also stay connected in the marriage. In response to this contradiction, Sahlstein et al. (2009) observed two distinct methods used to reconcile these opposing needs, or praxis patterns: balance or denial. For the balance praxis, wives managed their feelings of separation by balancing their autonomy through connection-seeking practices with their spouses. In other words, these spouses were able to strike a balance between their opposing needs wherein neither autonomy nor connection is fully fulfilled but rather each is partially attained (Sahlstein, 2009). Conversely, other spouses utilized the denial praxis. In relational dialectics theory, the denial praxis involves an "effort to subvert, obscure, or deny the presence of a contradiction by legitimating only one dialectical force to the exclusion of countervailing ones,'' (Montgomery & Baxter, 1998, p. 162). In the Sahlstein et al. study (2009), most spouses exhibited denial by rejecting connection-seeking behaviors. Instead, these wives emphasized their independence by putting their marriage on hold and focusing on themselves (Sahlstein et al., 2009). While the concentration on their autonomy provided a "relatively positive" negotiation of this contradiction whereby wives were able to manage feelings of separation from their partners, the authors noted that this was still "troubling since denial is a theoretically dysfunctional way to negotiate contradictions" (Sahlstein et al., 2009, p. 436).

I suggest that even though the denial praxis was shown to be relatively successful in managing the autonomy-connection contradiction in the aforementioned study, it is unlikely to

be as effective as the balance praxis. For example, post-deployment, the couples in the study that experienced the least amount of conflict upon return ended up being those that were able to maintain open lines of communication and act as a team during deployment periods (Sahlstein et al., 2009). Overall, attempts to manage the separation may be manifested in communication patterns such that some spouses engage in very frequent communication whereas others have low levels of contact. I suggest that emphasis on autonomy and denial of connection (i.e., denial praxis) is less effective than the balance praxis in negotiating the contradiction of autonomy and connection. Similarly, the other form of denial praxis, an over-emphasis of communication and denial of autonomy, would also be disadvantageous.

The purpose of this study is to identify the relationship between frequency of communication and well-being for civilian spouses during deployment periods. In the present study, I conceptualize two forms of well-being: psychological well-being and marital quality. Psychological well-being is an important outcome to examine given that deployment is associated with higher rates of general stress, anxiety, and depression among spouses (Burton et al., 2010; Burrell et al., 2006; Eaton et al., 2008). Additionally, based on the relational dialectic theory (Sahlstein et al., 2009), I suspect that differences in the frequency of communication among spouses will also be associated with differences in marital quality. For example, I suggest that the spouses reporting the best marital quality will also manage their feelings of separation through the balance of the autonomy and connection. Provided that excessive contact may be detrimental during deployment periods (Warner et al., 2007) and that extreme attention to autonomy at the expense of connectedness may also be disadvantageous, I expect that, consistent with relational dialectics theory, a moderate level of communication (balance praxis) will be associated with the highest well-being, whereas very frequent communications or very infrequent

communications will be associated with poorer well-being. That is, I expect a curvilinear association between communication frequency and civilian spouses' well-being (i.e., psychological well-being and perceptions of marital quality).

Method

Participants

I used data from the Department of Defense's 2006 Survey of Active Duty Spouses which includes spouses of Army, Navy, Air Force, and Marine Corps military service members who had at least six months of service at the beginning of the survey fielding period. Surveys were mailed to spouses of active duty military members between November of 2005 and June of 2006. Paper-and-pencil and web surveys were used to obtain data. The contact information used to reach potential participants was provided by the United States Department of Defense but deleted from the final dataset to preserve anonymity. After establishing the sampling frame, the sample was stratified to include particular groups of interest (i.e., branch, pay grade, gender, duty location, ethnicity/race, etc.) using information provided by Defense Manpower Data Center (DMDC), Family Database, Active Duty Pay File, Basic Allowance for Housing (BAH) Population file, and the Defense Enrollment Eligibility Reporting System (DEERS) Medical Point-In-Time Extract.

In total, 36,054 individuals were targeted for participation. Of these, 92.7% were located and 34.2% returned completed and usable surveys, leaving a sample of 11,138. Responses were then weighted to be representative of the American active-duty service member spouse population. For this study, I selected a subsample of respondents consisting of only civilian wives with service member husbands who were currently experiencing deployment. Thus, the final sample included 2,230 civilian wives with deployed husbands.

Participants in this final sample were 37.5% Army, 30.2% Marine Corps, 20.3% Navy, and 12.1% Air Force spouses. The pay grades of their husbands varied from E1 to O6 where "E" stands for "enlisted", "O" denotes commissioned officers, and the number indicates the pay grade for that position. The other pay category is "W" for warrant officers. The greater part of the selected subsample included wives with enlisted husbands (78.0%) including 37.3% with a pay grade of E1-E4, 35.0% with a pay grade of E5-E9, and 5.7% reported as warrant officers, W1-W5. The remaining 22.0% were officers with a pay grade of O1-O6. Of the selected subsample, 66.8% were White, 13.9% were Hispanic, 8.9% Black, 5.8% were Asian, 1.2% were Native American or Alaskan Native, and 2.8% were more than one race. For age, 7.5% were 20 years old or younger, 26.1% between 21 and 25, 22.4% were between 26 and 30, 18.0% were between 31 and 35, 14.7% were between 36 and 40, and 11.3% were 41 years old or older. The majority of participants (67.9%) reported having children under the age of 18 living with them during the spouse's most recent deployment.

Measures

Communication frequency. Communication frequency referred to the frequency with which civilian wives reported communicating with their service member husbands during deployment via a variety of methods on a scale of 0 to 5 (0 = Never, 1 = Less than once a month, 2 = Less than once a week, 3 = One or two times a week, 4 = Three or four times a week, 5 = Daily). I sorted these communication methods into two types: *asynchronous communication* and *synchronous communication*. *Asynchronous communication* was a sum score of how frequently they reported using both e-mail/internet and postal mail (Range = 0 - 10, Mean = 4.27, *SD* = 1.96). *Synchronous communication* was a sum score of how frequently they reported using

commercial telephone, DSN telephone, military exchange provided telephone, military video phone, and video teleconference (Range = 0 - 18, Mean = 4.51, *SD* = 2.88).

Well-being. Well-being was conceptualized as two distinct outcomes: *martial quality* and *psychological well-being*. *Marital quality* was a summed 6-item scale. Marital quality items followed from the stem question "To what extent do you agree with the following statement?" and included items such as: "My relationship with my spouse is strong," "We have a good relationship," and "I really feel like part of a team with my spouse." Response choices to marital quality questions ranged from 1 (strongly agree) to 5 (strongly disagree) and were reverse coded such that higher scores indicated better marital quality. The sum scale for the 6 items ranged from 6 to 30 (Mean = 26.72, *SD* = 5.04, Cronbach's alpha = 0.96).

Psychological well-being was measured using a summed 3-item scale and followed from the stem question "During your spouse's most recent deployment, to what extent were each of the following a problem for you?" The items selected for this study were anxiety/depression, sleep, and loneliness (e.g. "To what extent were feelings of anxiety or depression a problem for you?") with options from 1 (large extent) to 5 (not at all). The sum scale for the 3 items ranged from 3 to 15. For psychological well-being, higher scores indicate fewer problems and thus better well-being (Mean = 7.49, *SD* = 3.44, Cronbach's alpha = 0.83).

Analyses

To examine whether there was a curvilinear association of synchronous and asynchronous communication frequencies with the dependent variables (i.e., marital quality and psychological well-being), I conducted regressions following the methods outlined by Cohen, Cohen, Aiken, and West (2003). Specifically, each type of communication was first grand-mean centered, and then a quadratic for each was computed by squaring the centered value of

communication. The independent variables in the models included the linear predictors (centered synchronous and asynchronous communication) and the centered quadratic predictors (squared synchronous and asynchronous communication). Additionally, I included two controls. First, I controlled for whether or not children under the age of 18 were living with the respondent during the deployment period as taking on the role and additional responsibilities of a "single-parent" while a partner is deployed may impact well-being responses. Second, I controlled for military pay grade (E1-O6) as this may affect availability and access to various types of communication.

As mentioned earlier, this dataset included weights so that the sample estimates would more closely approximate the population. To incorporate the weight variable in regressions, I used SAS PROC SURVEYREG. After selecting eligible cases (i.e., those who completed and returned usable surveys and who fit my sample criteria), I applied the weight and ran the regressions with the controls and independent variables previously specified. Two regressions were conducted; one for marital quality and one for psychological well-being.

Results

Below, I describe the findings for both dependent variables: marital quality and psychological well-being. For each outcome, I interpret the significant controls, linear main effects, and curvilinear effects. Full results are in Table 1.

Marital Quality

For marital quality, both of the controls were significant. The presence of children in the household during deployment was negatively associated with marital quality (b = -.80, p < .01), such that spouses with children reported lower marital quality. Higher service member pay grades were associated with increased marital quality (b = .46, p < .001).

For asynchronous communication, the linear main effect was also significant and was positively associated with marital quality ($b = .32$, $p < .001$). The quadratic (squared) predictor was not significant in association with marital quality. Thus asynchronous communication had a significant positive linear relationship with marital quality. Because increased asynchronous communication was associated with a linear (but not a curvilinear) increase in marital quality, my hypothesis that moderate levels of communication would predict the best marital quality was not supported for this type of communication.

For synchronous communication, the linear main effect was also positively associated with marital quality ($b = .26$, $p < .001$), but here the effect was qualified by a significant quadratic ($b = -.03$, $p < .05$), indicating a curvilinear relationship. The curvilinear relationship was then probed using the methods described by Cohen et al. (2003), whereby one solves for the dependent variable at various values of the independent variable (here, centered synchronous communication). Values of marital quality were plotted for every half-point increase from the minimum of the centered synchronous communication scale (-4.5) to the maximum (13.5). When graphed (Figure 1), this effect was expressed as a parabola in an inverted U-shape. The peak of the curve, or the point at which the bend occurs, was 5.24 on the centered synchronous communication scale, which is nearly two standard deviations above the mean. This implies that an increase in synchronous communication is beneficial for marital quality until a relatively high frequency at which point it then becomes detrimental. This curvilinear relationship supported my hypothesis that a moderate level of communication would be associated with the highest marital quality, whereas very frequent communication or very infrequent communication would be associated with poorer marital quality.

Psychological Well-Being

Similar to marital quality, the control of pay grade was significant and positively associated with psychological well-being ($b = .63$, $p < .001$) such that as pay grade increased, psychological well-being increased. Unlike marital quality, the presence of children in the home was not significantly associated with psychological well-being.

Again, the linear main effect of asynchronous communication was significant and positive ($b = .14$, $p < .01$) but not qualified by a quadratic. Rather, this effect is interpreted as a positive linear relationship such that as couples communicate more frequently via asynchronous methods, civilian spouses report better psychological well-being, or fewer problems.

For synchronous communication, neither the linear nor the quadratic effect was significant for psychological well-being. Overall, the hypothesis that moderate levels of communication would be associated with the highest reports of psychological well-being was not supported given that the effect for asynchronous communication was linear and the effect for synchronous communication was not significant.

Discussion

Although frequent communication during deployment may facilitate coping or reduce stress (Maguire & Sahlstein, 2009; Mansson et al., 2011), increased communication may not always be associated with improved well-being. Instead, very high levels of communication could actually be detrimental. For example, some researchers have proposed that too much communication with the home front could have a negative impact on the occupational effectiveness, unit cohesion, and morale of service members (Greene et al., 2010). Similar adverse effects have also been found among service members' loved ones at home such that increased communication was associated with increased stress for the family (Warner et al., 2007). Thus, to support well-being in service members' families it is important to understand the

conditions under which increased communication may be beneficial or detrimental. In the present study, I investigated the relationship between the frequency of different types of communication (i.e., synchronous and asynchronous) and both individual and relational well-being for civilian spouses of deployed service members.

I used a relational dialectics perspective (Baxter & Montgomery, 1996; Sahlstein et al., 2009) to suggest that the relationship between communication frequency and spousal well-being would be curvilinear. That is, I expected moderate levels of communication would be associated with the best outcomes for psychological well-being and marital quality because moderate levels of contact would allow for a successful negotiation (i.e., balance praxis) of autonomy for the spouse and connection to her partner. Alternatively, very low or very high levels of communication would be associated with poorer outcomes because they would signify over-emphasis of either autonomy or connectedness and foregoing the other (i.e., denial praxis). I examined these patterns for two different types of communication: synchronous, or "real time" methods of communication (e.g., phone, video phone), and asynchronous, or "delayed" methods (e.g., post, e-mail). This approach allowed me to examine the relationships of both communication frequency and communication method with spouse well-being. I found different patterns of results for asynchronous and synchronous communication.

Although I predicted curvilinear relationships for the two types of communication with well-being for the spouse, asynchronous communication only had positive linear effects for psychological well-being and marital quality; as asynchronous communication frequency increased, so did psychological well-being and marital quality. Increased use of asynchronous types of communication like letters and emails could be positively associated with psychological well-being because these methods require one to reflect on personal thoughts and feelings.

Introspection may then have a therapeutic effect that improves psychological health. This is consistent with the work of Pennebaker (1997) who has demonstrated that the simple act of expressing thoughts and feelings about emotionally challenging experiences on paper is shown to boost emotional and physical health. Thus, as spouses write letters or emails to the deployed service member, they may also be expressing emotions and thoughts, thereby improving their psychological well-being. The positive association between asynchronous communication and marital quality may similarly be related to the pensive act of writing. For example, when spouses receive letters or emails with expressions of emotion, they may interpret these letters as carefully crafted and effortful methods of communication. Service members that took the time to compose letters or emails while deployed may be considered more supportive and invested in their relationships at home. Increased support through more frequent use of these communication methods may then impact marital quality.

Despite my expectation that communication frequency would be beneficial up to a certain point then become detrimental, I did not find this curvilinear effect for asynchronous communication methods. Perhaps asynchronous communication did not become detrimental for marital quality or psychological well-being at higher frequencies because these forms of communication do not require coordination with the deployed service member. Instead, asynchronous communication methods can be utilized at the convenience of the civilian spouse. This prevents even very frequent use of asynchronous communication from interfering with the daily life or autonomy of the spouse at home. Whereas synchronous communication methods may require wives to schedule communication times around the service members' availability and access, asynchronous communication provides spouses with the independence to communicate at times that fit into their routines.

For synchronous communication, the expected curvilinear relationship emerged but only between frequency of communication and marital quality. Consistent with relational dialectics theory (Baxter & Montgomery, 1996; Sahlstein et al., 2009), this curvilinear effect supported my hypothesis that a moderate level of communication allows for a successful negotiation (balance) of the autonomy-connection contradiction, and thus results in the best reports of marital quality. Conversely, extremely low frequencies of communication prevent the feeling of connectedness with the service member, and extremely high frequencies of communication inhibit the spouse from achieving autonomy. It should be noted that the point at which an increase in communication became detrimental to marital quality was nearly two standard deviations above the mean for synchronous communication frequency. Thus, an increase in "real time" communication is beneficial for marital quality until relatively high frequencies of communication.

The Challenges of "Real Time" Communication

Although many researchers suggest communication is key to relational maintenance during stressful periods (Canary & Stafford, 1992, Ledermann et al., 2010, Merolla, 2010), there are several explanations as to why very high frequencies of some types of communication may have a negative effect on marital quality. Consider the fundamental difference in asynchronous and synchronous communication: synchronous communication occurs in real time and requires an immediate "back-and-forth" exchange. Thus, I suggest that this "real time" exchange may be more likely than a delayed type of communication to negatively impact well-being, particularly when faced with content regulations, technological glitches, and obstacles in scheduling times of contact.

Given that open communication and discussion of daily activities has been linked to successful relational maintenance (Mansson et al., 2011), one must consider how restrictions on this type of content in communication will impact relationships. For example, the government has substantial control over what service members are permitted to discuss with friends and family on the home front (Merolla, 2010a). Specifically, many service members are restricted in sharing what they do on a daily basis or even where they are located and this may be a significant source of problems in their relationships with loved ones at home (Hinojosa, Hinojosa, & Hognas, 2012). Because deployed service members are unable to share the details of their day with their spouses, wives report that of the content of their conversations, "there's little said of any value" (Merolla, 2010a, p.18). Moreover, some service members admit that they may not have anything to say at all (Hinojosa et al., 2012). Thus, with military limitations on conversation topics, particularly those topics that have been shown to be important to relational maintenance, these synchronous or "real time" exchanges may no longer be meaningful or beneficial for their relationships.

Not only is communication content regulated by the military during deployment, but communication may also be obstructed by unreliable communication technology. Synchronous communication depends on a back-and-forth exchange to be successful. If technological problems associated with synchronous communication continue impair this exchange, eventually this type of communication may no longer be advantageous. In the study by Hinojosa and colleagues (2012), service members revealed that there were often problems with the connections and the communication equipment was of poor quality. Soldiers shared how phone lines would repeatedly go down, messages would not be conveyed correctly leading to miscommunication, and after a few disconnections, spouses would be aggravated (Hinojosa et

al., 2012). Clearly, the quality of technology is important to effective synchronous communication and if there are continued problems with the dependability and access to this technology, synchronous communication may actually frustrate spouses and become detrimental to marital quality.

Finally, synchronous communication may be negatively associated with marital quality because the interference of synchronous communication on the autonomy of a civilian spouse may also add to the challenge of relational maintenance during deployment. For many couples, scheduling time to connect during deployment proved problematic because of restricted access to information (Hinojosa et al., 20012). One service member, Matt, shared how restrictions were a source of conflict between him and his wife because on several occasions she was expecting his call but his mission prevented him from contacting her (Hinojosa et al., 2008). Matt and others in this study revealed that "when they did make contact, family members were angered or hurt that they did not call when expected and were frustrated when service members could not tell them why" (Hinojosa et al., 2008, p. 193). For another service member, "difficult access, lengthy waiting periods, and limited free time that often required attending to other duties" prevented the couple from communicating as scheduled and posed a strain on their relationship (p. 194). Thus it appears that for synchronous communication, unlike asynchronous communication, timing is everything. Synchronous communication methods may simply be more difficult and frustrating at very frequent intervals because of the impossibility of accurate and reliable planning that it requires.

Although I expected both types of communication to be significantly associated with both types of well-being, I found that synchronous communication was only associated with marital quality. The effects of synchronous communication may have been significant for marital quality

but not for psychological well-being because dyadic constructs (e.g., communication with a partner) might be more closely linked to dyadic outcomes (marital quality) than to individual outcomes (psychological well-being). That is, because synchronous communication requires a dyadic, "back-and-forth" interaction between partners, it seems plausible that this type of communication would be more associated with relational outcomes than individual outcomes. The lack of significant associations between synchronous communication and psychological well-being depart from what I found for asynchronous communication and psychological well-being. This pattern may be because asynchronous communication allows for an overlap of maintenance behaviors, whereas synchronous communication only addresses one form of maintenance (Merolla, 2010b). For example, consider how synchronous methods employ dyadic maintenance through interactive, instantaneous communication between two partners. Alternatively, asynchronous communication, while dyadic in that it allows for the connection of two spouses, also involves intrapersonal maintenance through the individual cognition time afforded by delayed communication methods (Merolla, 2010b). Thus, despite the significant effects of asynchronous communication on psychological well-being, synchronous communication did not show the same effects.

Strengths and Limitations

Some limitations should be noted. First, this study was correlational. Thus, for asynchronous communication and marital quality, the very low or high frequencies of communication may not cause poor marital quality but actually be a result of poor marital quality. For example, perhaps couples communicate at reduced levels because their relationship is not satisfying or perhaps they increase communication in order to work out existing marital problems. Further, because this project used secondary data, responses are limited to questions

that were included on the survey. Consequently, specific information like the content of communications, the extent to which spouses perceived support from communication, or technological problems experienced with certain methods was unavailable.

Still, several advantages exist. This study is one of the first to examine how different forms and frequencies communication may be associated with the well-being of civilian wives during their husbands' deployments. This is also the first study, to my knowledge, to hypothesize and identify a curvilinear relationship between communication frequency and marital quality. This finding is important because it suggests that not all communication is created equal. Rather, to best foster positive outcomes for civilian wives during their husbands' deployment, certain types and levels of communication may be more beneficial than others. Additionally, this study relied on surveys filled out by the wives *during* their husbands' deployment rather than relying on retrospective accounts of their communication and well-being. In utilizing this method, the present study is less susceptible to retrospective bias. Finally, even after restricting the sample for women with husbands currently experiencing deployment, the sample size was still quite large (n = 2,230) and responses were weighted to be representative of the American active-duty service member spouse population. This suggests that the observed patterns of communication and well-being among this sample may be generalizable to the population of civilian wives.

This study provides important information on the potential effects of communication methods and frequencies on spousal well-being during deployment, but much research is still needed. One direction for future research would be to examine how these effects may vary during deployment versus post-deployment. For example, in a study by Sahlstein et al. (2009), couples who were able to maintain open communication and act as a team during deployment also experienced the least amount of conflict post-deployment. Thus, it may be advantageous to

understand the relationship between quantity (i.e., frequency) and quality (i.e., content or topics) of communication during deployment with spousal well-being outcomes post-deployment. In other words, how would well-being *post*-deployment be associated with communication frequencies and well-being *during* deployment? Another avenue for research could examine how location of deployment and exposure to combat may moderate the effects of communication. Previous researchers suggested that civilian spouses were found to be more likely to withhold stresses, concerns, or problems from their deployed husbands when he is perceived at a greater risk of danger (Joseph & Afifi, 2010), but this protected buffering had negative effects for these spouses. Perhaps then, service member deployment to a warzone may alter the effects of communication on well-being for civilian spouses. In addition to the civilian spouse, future directions could also include looking at how the association between frequency and methods of communication affect the well-being of children or parents of the service member during deployment.

Conclusions

In sum, this study identified the associations between asynchronous and synchronous communication methods with marital quality and psychological well-being for civilian spouses during deployment. I found that for asynchronous communication, increased frequency of communication may contribute to improved psychological well-being and marital quality. For synchronous communication, I found that increased communication is only beneficial for martial quality until a certain point; at very high frequencies of synchronous communication, this contact may actually become detrimental.

There are several important implications of this research. The findings can contribute to the development of public policy that improves the availability of technology or resources for

communication between spouses during deployment. For example, reducing cost and increasing availability to asynchronous methods of communication like post and email may in turn improve the well-being of military spouses during deployment. Further, improving the technological quality of synchronous methods may also help to prevent a negative effect of synchronous communication on marital quality; however research is still needed to determine how these technological mechanisms may contribute to the downturn in marital quality at high frequencies of synchronous communication. These findings can also inform program practitioners, clinicians, and counselors, so that they can better support their clients. Specifically, those working with civilian spouses during their partners' deployment might encourage writing letters and emails to maintain connection and to facilitate the processing of emotions. Further, practitioners may help these military couples to maintain healthy levels of synchronous contact for optimal relationship outcomes. For example, counselors or clinicians may advise civilian spouses about the importance of balance in the autonomy-connection contradiction and caution against over-emphasis of balance or autonomy. Instead, spouses may be provided with successful ways to negotiate this contradiction. Additionally, practitioners could make civilian spouses aware of potential problems of synchronous communication that may contribute to poorer well-being during deployment (i.e., content restrictions, technological glitches, or scheduling conflicts). A better understanding of these possible challenges may help spouses to recognize their unique situation during deployment and allow clinicians to facilitate coping with these problems. Overall, communication is a notable mechanism in maintaining connection during the stressful period of deployment, but it is also important to recognize that more is not always better.

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Table 1

Regression Results for Marital Quality and Psychological Well-Being

	Marital Quality		Psychological Well-Being	
	B	*SE*	*B*	*SE*
Intercept	27.20***	0.60	6.08***	0.38
Children	-0.80**	0.31	0.09	0.20
Pay Grade	0.46***	0.10	0.63***	0.07
Asynchronous Communication	0.32***	0.08	0.14**	0.05
Asynchronous Communication (Quadratic)	-0.03	0.02	-0.00	0.02
Synchronous Communication	0.26***	0.06	-0.05	0.04
Synchronous Communication (Quadratic)	-0.03*	0.01	-0.00	0.01

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. *B* indicates the unstandardized regression coefficient, and *SE* indicates the standard error for the coefficient.

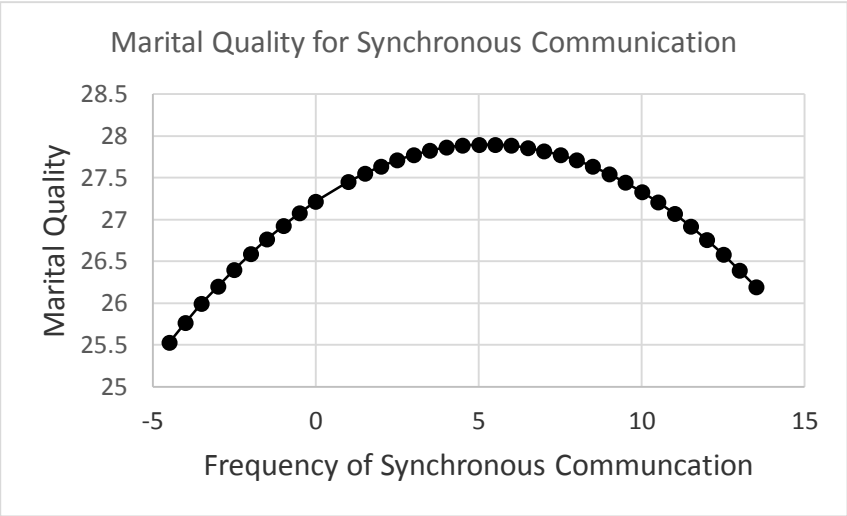

Figure 1. Association between Marital Quality and Frequency of Synchronous Communication. The y-axis represents participant reports of marital quality and the x-axis represents the frequency with which spouses communicated using synchronous communication methods during deployment.