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Social Fitness and Resilience

A Review of Relevant Constructs, Measures, and Links to Well-Being

Juliana McGene

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RAND Project AIR FORCE

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Preface

U.S. military personnel have been engaged in operations in Central Asia and the Middle East for the past decade. Members of the armed forces also deploy to other regions of the world. Many aspects of deployments have the potential to contribute to individual stress, such as uncertainty about deployment time lines; culture shock in theater; fear of or confrontation with death or physical injury; environmental challenges, such as extreme climates and geographical features; austere living conditions; separation from friends and family members; and reintegration after deployment. Service members and their families also manage other military-related stressors, such as frequent relocations, long work hours, and the additional family separations associated with unaccompanied tours and domestic training exercises. Some service members and their families may cope well or even thrive as they overcome adversity and accomplish challenging tasks. However, some may suffer negative consequences as a result of military-related stressors, such as physical injury, including traumatic brain injury; depression, anxiety, or other mood disorders; post-traumatic stress disorder; spiritual crises; substance abuse; family dysfunction; marital problems and dissolutions; social isolation; and, in extreme cases, even suicide or suicide attempts. With the aim of preventing such deleterious outcomes rather than simply responding to them, the study of resilience is of paramount importance.

The Air Force offices of Airman and Family Services (AF/A1S), the Surgeon General (AF/SG), and the Secretary of the Air Force, Force Management and Personnel (SAF/MRM) asked the RAND Corporation to help the Air Force develop its programs to promote resiliency among military and civilian Air Force personnel and their families. This report is one in a series of nine reports that resulted from that research effort.

The overarching report, *Airman and Family Resilience: Lessons from the Scientific Literature* (Meadows and Miller, forthcoming), provides an introduction to resilience concepts and research, documents established and emerging Air Force resiliency efforts, and reviews the Air Force metrics for tracking the resiliency of Air Force personnel and their families. It also provides recommendations to support the development of resilience initiatives across the Air Force. We use the term *resilience* to refer to the ability to withstand, recover from, and grow in the face of stressors and *fitness*, which is related, as a “state of adaptation in balance with the conditions at hand” (Mullen, 2010).

Accompanying that overarching report are eight supplemental reports that outline the constructs, metrics, and influential factors relevant to resiliency across the eight domains of Total Force Fitness:

- medical
- nutritional
- environmental

- physical
- social
- spiritual
- behavioral
- psychological.

These supplemental reports are not intended to be a comprehensive review of the entire literature within a domain. Rather, they focus on studies that consider the stress-buffering aspects of each domain, regardless of whether the term *resilience* is specifically used. This expanded the scope of the reviews to include a broader range of applicable studies and also allowed for terminology differences that occur across different disciplines (e.g., stress management, hardiness).

In this report, we identify key constructs relevant to social fitness found in social science research as well as sources of social support and social links to well-being. We also review the negative aspects of social ties, and barriers and bridges to social support. Finally, the report describes interventions used to promote social fitness and well-being that can inform the resilience-building efforts of the armed forces.

The results of these reports should be relevant to Air Force leaders who are tasked with monitoring and supporting the well-being of active duty, reserve, and guard Airmen, and Air Force civilian employees, as well as their families. The results of our studies may also help broaden the scope of research on resilience and help Airmen and their families achieve optimal social fitness.

The research described in this report was conducted within the Manpower, Personnel, and Training Program of RAND Project AIR FORCE as part of a fiscal year 2011 study titled “Program and Facility Support for Air Force Personnel and Family Resiliency.”

RAND Project AIR FORCE

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Summary

Positive social connections, when established, can provide important social resources that alter the way individuals experience and respond to stressful events or circumstances. Military families face several unique challenges that can strain the strength and accessibility of these social resources. This report examines several issues related to social fitness.

Social fitness is defined as the combined resources a person gets from his or her social world. This concept encompasses the availability and maintenance of social relationships, and the ability to utilize those ties to manage stressors and successfully perform tasks. Social fitness *resources* are the aspects of those relationships that strengthen a person's ability to withstand and rebound from challenges (e.g., stress, threat, or disaster) or even grow from them.

The key resilience factor associated with social fitness is social support. Central sources of social support for U.S. Airmen include family, friends, co-workers (including military units), physical communities and neighborhoods, cyber communities, and imagined communities (groups with which a person identifies and to which he or she feels a sense of belonging even if he or she has never met others in the group). The structure of one's social networks can also be a source of social support. Social support comes in three primary forms: emotional (e.g., having someone to talk to about problems), instrumental (e.g., a loan, a ride to a doctor's appointment), and informational (e.g., knowledge about which companies are hiring). In this report, we identify several specific scales and indexes used to measure such support. Social support can also be either actual or perceived. In fact, there is some evidence that perceived support is more influential on mental health than actual support.

Emotional, instrumental, and informational support from families, friends, co-workers, fellow unit members, neighbors, and other communities have been linked to higher psychological, physical, and social well-being. However, social relationships can also have negative consequences for well-being. Relationship conflict is linked to poor psychological outcomes, as relationships themselves can be a source of stress. It is strong, *positive* social ties and the constructive support they provide that can enhance a person's adjustment and help protect him or her from the deleterious effects of stress.

Bridges to social support include increased group stability, and more frequent, positive interactions and communication (face-to-face as well as other forms of interaction), while barriers to social support include group discord and conflict, geographic movement, and bullying and ostracism. Therefore, one of the key ways to facilitate social support is to promote positive cohesion and stability in the groups that give such support.

Interventions aimed at increasing the quantity and quality of social support should focus on four factors, including sociodemographic characteristics and dispositional traits (e.g., gender, optimism) that may relate to social support and its benefits in important ways; dynamics that strengthen social groups, support networks, and teams (e.g., social cohesion); practices that improve social skills and promote more frequent and constructive interactions (e.g., communication, mutual exchange); and activities that reduce conflict and group division (e.g., integration). Geographic movement is an especially significant barrier to social support in military populations. For this reason, interventions that utilize cyber or virtual communities (e.g., internet, chat rooms, Facebook, etc.) may be especially useful tools for increasing these populations' social connectedness and social support.

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RAND's Sarah Meadows and Laura Miller led the overarching research effort on resilience and provided extensive feedback on a previous draft of this manuscript. Donna White and Hosay Salam Yaqub provided valuable assistance formatting the manuscript and the bibliography for publication.

Abbreviations

CPQ	Close Persons Questionnaire
DAS	Dyadic Adjustment Scale
FOCUS	Families OverComing Under Stress
MOS	Medical Outcomes Study
PHDCN	Project on Human Development in Chicago Neighborhoods
PTSD	Post-Traumatic Stress Disorder
QMI	Quality Marriage Index
TFF	Total Force Fitness

1. The Context of This Report¹

This report is one of a series designed to support Air Force leaders in promoting resilience among Airmen, its civilian employees, and Air Force family members. The research sponsors requested that RAND assess the current resilience-related constructs and measures in the scientific literature and report any evidence of initiatives that promote resilience across a number of domains. We did not limit our search to research conducted in military settings or with military personnel, as Air Force leaders sought the opportunity to apply the results of these studies to a population that had not yet been addressed (i.e., Airmen). Further, many Air Force services support Air Force civilians and family members, and thus the results of civilian studies would apply to these populations.

This study adopts the Air Force definition of resilience: “the ability to withstand, recover and/or grow in the face of stressors and changing demands,” which we found to encompass a range of definitions of resilience given throughout the scientific literature.² By focusing on resilience, the armed forces aim to expand their care to ensure the well-being of military personnel and their families through preventive measures and not by just treating members after they begin to experience negative outcomes (e.g., depression, anxiety, insomnia, substance abuse, post-traumatic stress disorder [PTSD], or suicidal ideation).

Admiral Michael Mullen, Chairman of the Joint Chiefs of Staff from 2007 to 2011, outlined the concept of Total Force Fitness (TFF) in a special issue of the journal *Military Medicine*: “A total force that has achieved total fitness is healthy, ready, and resilient; capable of meeting challenges and surviving threats” (Mullen, 2010, p. 1). This notion of “fitness” is directly related to the concept of resilience. The same issue of *Military Medicine* also reflected the collective effort of scholars, health professionals, and military personnel, who outlined the eight domains of TFF: medical, nutritional, environmental, physical, social, spiritual, behavioral, and psychological. This framework expands on the traditional conceptualization of resilience by looking beyond the psychological realm to also emphasize the mind-body connection and the interdependence of each of the eight domains.

The research sponsors requested that RAND adopt the eight fitness domains as the organizing framework for our literature review. We followed this general framework, although in some cases we adapted the scope of a domain to better reflect the relevant

¹ Adapted from Meadows and Miller, forthcoming.

² The Air Force adopted this definition, which was developed by the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE, 2011).

research. Thus, this study resulted in eight reports, each focusing on resilience-related research in one of the TFF domains, but we note that not all of these domains are mutually exclusive. These eight reports define each domain and address the following interrelated topics:

- medical: preventive care, the presence and management of injuries, chronic conditions, and barriers and bridges to accessing appropriate, quality health care (Shih, Meadows, and Martin, 2013)
- nutritional: food intake, dietary patterns and behavior, and the food environment (Flórez, Shih, and Martin, forthcoming)
- environmental: environmental stressors and potential workplace injuries, and preventive and protective factors (Shih, Meadows, Mendeloff, and Bowling, forthcoming)
- physical: physical activity and fitness (Robson, 2013)
- social: social fitness and social support from family, friends, co-workers/unit members, neighbors, and cyber communities (McGene, 2013)
- spiritual: spiritual worldview, personal religious or spiritual practices and rituals, support from a spiritual community, and spiritual coping (Yeung and Martin, 2013)
- behavioral: health behaviors related to sleep and to drug, alcohol, and tobacco use (Robson and Salcedo, forthcoming)
- psychological: self-regulation, positive and negative affect, perceived control, self-efficacy, self-esteem, optimism, adaptability, self-awareness, and emotional intelligence (Robson, forthcoming).

These reports are not intended to be comprehensive reviews of the entire literature within a domain. Rather, they focus on those studies that consider the stress-buffering aspects of each domain, regardless of whether the term *resilience* is specifically used. This expanded the scope of the reviews to include a broader range of studies and also allowed for differences in the terminology used across different disciplines (e.g., stress management, hardiness). We sought evidence both on the main effects of resilience factors in each domain (i.e., those that promote general well-being) and on the indirect or interactive effects (i.e., those that buffer the negative effects of stress).

Because the Air Force commissioned this research to specifically address individuals' capacity to be resilient, and thus their well-being, our reports do not address whether or how fitness in each of the eight TFF domains could be linked to other outcomes of interest to the military, such as performance, military discipline, unit readiness, personnel costs, attrition, or retention. Those worthy topics were beyond the scope of this project.

Some other important parameters shaped this literature review. First, across the study, we focused on research from the past decade, although older studies are included, particularly landmark studies that still define the research landscape or where a particular line of inquiry has been dormant in recent years. Second, we prioritized research on adults in the United States. Research on children was included where particularly germane (e.g., discussions of family as a form of social support), and, occasionally,

research on adults in other Western nations is referenced or subsumed within a larger study. Research on elderly populations was generally excluded. Third, we prioritized literature reviews, meta-analyses, and ongoing bodies of research over more singular, smaller-scale studies.

The search for evidence on ways to promote resilience in each domain included both actions that individuals could take and actions that organizations could take, such as information campaigns, policies, directives, programs, initiatives, facilities, or other resources. We did not filter out evidence related to Air Force practices already under way, as the Air Force was interested both in research related to existing practices and in research that might suggest new paths for promoting resilience. Our aim was not to collect examples of creative or promising initiatives at large but to seek scholarly publications assessing the stress-buffering capacity of initiatives. Thus, in general, this collection of reviews does not address initiatives that have not yet been evaluated for their effect.

Building on the foundation of the eight reports that assess the scientific literature in each domain, RAND prepared an overarching report that brings together the highlights of these reviews and examines their relevance to current Air Force metrics and programs. That ninth report, *Airman and Family Resilience: Lessons from the Scientific Literature*, provides a more in-depth introduction to resilience concepts and research, presents our model of the relationship between resilience and TFF, documents established and emerging Air Force resiliency efforts, and reviews the Air Force metrics for tracking the resiliency of Air Force personnel and their families. By comparing the information we found in the research literature to Air Force practices, we were able to provide recommendations to support the development of initiatives to promote resilience across the Air Force. Although the overview report contains Air Force-specific recommendations that take into account all eight domains and existing Air Force practices, some are applicable to the military more generally and are highlighted at the end of this report.

2. Social Fitness Definition and Constructs

“No man is an island entire of itself; every man is a piece of the continent, a part of the main.”

— John Donne, Poet

“In time of test, family is best.”

— Burmese Proverb

The availability and quality of social resources carry important consequences for Airmen and their families. Military families face several unique challenges that can strain the strength and accessibility of their social resources. Examples include frequent geographic relocation, separation from family members and friends, residence in foreign countries, risk of service member injury and death, and negotiating transitions to and from deployment (Segal, 1986; Willerton, Wadsworth, and Riggs, 2011). These challenges have been especially pressing in recent years, with deployment cycles becoming longer and more frequent since 2001 (Hosek, Kavanagh, and Miller, 2006). When they are established, however, positive connections with family, friends, co-workers, and neighbors can provide important social resources that alter the way Airmen and their families experience and respond to stressful events or circumstances. Military sociologists see social cohesion and stability as “strength multipliers” (Coulter, Lester, and Yarvis, 2010). The strength of social ties and the resources available through them can have pivotal consequences for mental and physical health and general well-being (Cacioppo and Hawkley, 2009; Hogan, Linden, and Najarian, 2002). One prominent theory notes that the lack of a sense of belonging—which can be understood as a manifestation of inadequate social resources—is one of the three main predictors of death by suicide (Joiner, 2005). Considering such consequences, social fitness is an important pathway to Airmen’s resilience and well-being.

This report examines several issues related to social fitness. This chapter defines what is meant by social fitness and discusses its central construct—social support. (A related construct is the structure of one’s social networks—the web of an individual’s social relationships [Heaney and Israel, 2002; House, 1981; Israel, 1982]. A full review of the social network literature is beyond the scope of this report. However, we include references to social networks and network structure throughout this report.) The third chapter identifies the key measures used to capture social fitness and the groups that serve as sources of social support to its members (including families, friends, co-workers, fellow military unit members, neighborhoods, and cyber communities); it also includes a discussion of the implications of social fitness for well-being. The fourth chapter notes the central factors that facilitate or obstruct the availability of social resources. The fifth chapter considers the programmatic or policy efforts that are likely to increase facilitators

and decrease barriers to positive and accessible social resources. We conclude the report with an overall discussion of social fitness for Airmen and their families.

Definition

In the context of the TFF concept, social fitness is the availability and maintenance of social relationships and the ability of military personnel to utilize those relationships to manage stressors and successfully perform their duties (Cacioppo, Reis, and Zautra, 2011). Social fitness *resources* are the aspects of those relationships that give personnel the support they need to withstand and rebound from challenges (e.g., stress, threat, or disaster) or even grow from them. In this report, we focus on social support, a key element of social fitness. While we note that other factors, such as social network structure and intraindividual factors, such as personal hardiness or positivity, are also closely related to social fitness, we approach social network structure as a source of social support and conceptualize intraindividual factors as either barriers or facilitators to accessing available support.

Social support is the key aspect of social relationships that serves as a resource for health and well-being; this support may also help buffer against the effects of stress (Eisenberg and Wechster, 2003; House, Landis, and Umberson, 1988; Mickelson and Kubzansky, 2003). In their foundational work on social support, Sarason et al. (1983) define it as “the existence or availability of people on whom we can rely, people who let us know that they care about, value, and love us” (p. 127). More recent work continues to conceptualize social support as a resource tied to social relationships (e.g., Browning and Cagney, 2003; Mickelson and Kubzansky, 2003; Sobolewski and Amato, 2007). Aspects of social relationships, such as social cohesion, social network size, and group stability, are important promoters of social support. For instance, social networks that are more closely-knit, have more reciprocal exchanges of resources, are more homogeneous, and whose members have more geographic proximity to one another provide more emotional and instrumental support (see below) than networks with less of these qualities (Berkman and Glass, 2000; Heaney and Israel, 2002; Israel, 1982).

Social support has been correlated with an array of well-being outcomes, including emotional and psychological well-being, physical health, and mortality (Eisenberg and Wechsler, 2003; House, Landis, and Umberson, 1988; Sarason and Sarason, 1985, 2009; Sampson and Graif, 2009; Sobolewski and Amato, 2007; Umberson et al., 1996). As we describe in more detail below, the presence of social support may have a direct influence on well-being (Berkman and Glass, 2000), but it also appears to operate indirectly through the enhancement of individual and community coping resources that serve as buffers in the face of stressful circumstances, reducing the intensity or duration of exposure to the stressors themselves (Heaney and Israel, 2002; Rhodes, Contreras, and Mangelsdorf, 1994).

Although social fitness is closely linked to the individual fitness of a group's members, we exclude psychological and personality disorders related to sociability—such as emotional intelligence, social phobia, and psychopathology—from our examination of social fitness (for a fuller discussion of psychological fitness, see Robson, forthcoming). We do, however, consider the relevance of intraindividual factors for social support later in the report.

Constructs

There are three main forms of social support: emotional support, instrumental support, and informational support (see Wellman and Wortley, 1989, 1990). Emotional support, which has received the most attention in the research, comes from having close emotional relationships, especially with people with whom one can discuss or seek advice about personal problems. Instrumental support includes monetary gifts or exchanges (e.g., loans) as well as non-monetary practical assistance (e.g., free babysitting, lawn mowing, and help packing and moving belongings). Informational support provides recipients with useful knowledge that they do not possess on their own (e.g., information shared about programs and benefits, companies that are currently hiring, and upcoming social events or activities). A fourth form of social support is appraisal support, or the sharing of information that is useful for self-evaluation (Heaney and Israel, 2002; Sherbourne and Stewart, 1991). Appraisal support is consciously offered by the provider and is intended to be helpful. Examples include social comparisons, constructive feedback, and affirmations.

It is important to note that, although these forms of support (emotional, instrumental, informational, and appraisal) are distinct, they are highly interrelated. This is because people who provide one form of support often provide other forms as well (see Heaney and Israel, 2002; Sherbourne and Stewart, 1991). We note, however, that some evidence suggests that people tend to rely on different sources for different types of support (Schweizer, Schnegg, and Berzborn, 1998; Wellman and Wortley, 1989).

While most studies have focused on the positive aspects of social support, it is important to keep in mind that not all support is necessarily positive, as these exchanges can be intrusive, unhealthy, or even exploitative (e.g., see Fingerman et al., 2006; House, Landis, and Umberson, 1988). We discuss these possible negative aspects of social support in the later section on social support and well-being.

Social support can be either actual or perceived. As the name implies, actual support is realized, enacted support. For instance, when someone confides in someone else. Alternatively, perceived support is support that someone believes would be available if it were needed. For example, someone might believe they could turn to one of their friends if they needed to discuss a personal problem. We found few empirical comparisons between the importance of actual support and perceived support. However, Sarason et al.

(1996) find some evidence that perceived support is particularly important for the promotion of positive health and adjustment outcomes.

3. Measures and Sources of Social Fitness, and Its Link to Well-Being

We identified key measures of emotional, instrumental, and informational social support across several sources. These measures are typically assessed through surveys, interviews, and/or focus groups. Social sources of support can include families, friendships, groups of co-workers, clubs and associations, neighborhoods, and cyber communities. In this section, we outline the empirical evidence connecting the social support provided by these groups to an individual's well-being.

While there is much more empirical research linking the social support of families and neighborhoods to well-being than there is research assessing the impact of friendships, co-worker networks, and cyber relationships, a common theme throughout the literature is that positive social support is generally associated with higher levels of well-being.

Measures of Social Fitness

Research on social support provided by family has focused primarily on emotional and instrumental support. Measures of emotional family support capture the affective quality of relationships, especially between spouses (Booth et al., 1998; Epstein, Baldwin, and Bishop, 1983; Meredith, et al., 2011); Miller et al., 1985; Norton, 1983; Spanier, 1976; Sweet, Bumpass, and Call, 1988) and between parents and children (Booth et al., 1998). Affective relationship quality, or what might be referred to as family cohesion, includes relationship is indicated by closeness, warmth, and a low level of conflict and discord. These constructs have been measured using a variety of scales, such as the Dyadic Adjustment Scale (DAS) (Spanier, 1976; see also Busby et al., 1995; Graham et al., 2006) and the Quality Marriage Index (QMI) (Norton, 1983; see also Fincham, Paleari, and Regalia, 2002; Nazarina and Schumm, 2009; Neff and Karenly, 2004). Instrumental support from family has been captured using scales such as the Close Persons Questionnaire (CPQ) (Stansfeld and Marmot, 1992; see also Surtees, Wainwright, and Khaw, 2004).

Social support among friends has also been measured, primarily in terms of how close the affective ties are among peers and how much one can rely on peers for personal advice, assistance, or information. As with social support among family members, emotional, instrumental, and informational support from friends has been measured with the CPQ (Stansfeld and Marmot, 1992). Additional measures of emotional support include adolescents' attachment and closeness to friends (Laible, Carlo, and Raffaelli, 2000) and closeness to fellow students (McNeely and Falci, 2004).

Another important social support scale is the Medical Outcomes Study (MOS) Social Support Survey (Sherbourne and Stewart, 1991), which asks respondents about their perceived availability of “someone” (a family member, friend, or someone else) who can provide them with the four different types of functional support.

Measures of social support in the workplace include the level to which employees feel they can rely on their supervisors and co-workers when difficulties arise at work, how willing co-workers and supervisors are to listen to work-related problems, how helpful they are with task completion at work, and the level of supervisor support given in the form of praise (House, 1981; McGuire, 2007; Moyle, 1998; Nelson and Quick, 1991).

The measurement of social support in military units focuses on two distinct forms of group cohesion (Coulter, Lester, and Yarvis, 2010). Social cohesion at the unit level pertains to the interpersonal bonds among members (e.g., how much unit members care about one another and the perceived quality of the relationships a particular individual has with other members of the unit). Social unit cohesion is therefore analogous to the emotional support measured among other groups, such as families and groups of friends. It also includes the facilitation of intra-unit interaction, positive role modeling, and leadership (Meredith et al., 2011). Alternatively, measures of task cohesion tap a sense of shared commitment to the unit’s mission, the importance of accomplishing assigned unit goals, and a capacity for collective action (Meredith et al., 2011). Measures of both types of unit cohesion are found in the Platoon Cohesion Index (Siebold and Kelly, 1988). It is noteworthy that these two forms of cohesion are not always found together and, in some cases, may actually compete with one another (Coulter, Lester, and Yarvis, 2010).

Measures of social support in neighborhoods typically assess collective resources, such as aggregate economic affluence and collective efficacy (e.g., neighbors’ willingness to help each other), (Browning and Cagney, 2003) which help its members to meet their needs or group goals.¹ Measures of neighborhood social support gauge social cohesion, typically operationalized as the social order of the neighborhood, city, or installation; this social cohesion acts as a resource for collective action and community resilience because people in cohesive communities reach out to one another (Browning, 2002).

The most widely used measures of social cohesion are actually measures of the opposite—neighborhood or community disorder. These measures assess neighborhood characteristics such as crime, poverty, high residential mobility, and income inequality (e.g., The Project on Human Development in Chicago Neighborhoods [PHDCN]

¹ At the community level, social support is synonymous with social capital, which is defined as social cohesion (Putnam et al., 1993) or the social ties between people and between positions in a social network (Bourdieu, 1983; Coleman, 1988; 1990), which allow people to obtain resources through their group membership (Portes, 1998). For simplicity, we use only the term “social support” in the main text of this report.

Community Survey used by Sampson, Raudenbush, and Earls [1999]; and Raudenbush and Sampson [1999]).

Other measures of neighborhood social cohesion tap emotional, instrumental, and informational social support at the collective level, including shared values and social relationships (Bollen and Hoyle, 1990; Raudenbush and Sampson, 1999), the frequency of social interactions between neighbors (Bellair, 1997), the number of people available to deal with problems (Sarason et al., 1983), and adult interest in the behavior and well-being of young people in their community (Raudenbush and Sampson, 1999). Social cohesion also includes shared values and social relationships (Bollen and Hoyle, 1990; Raudenbush and Sampson, 1999), which are partly driven by individuals' identification with the group and the community's consensus that its members have a common understanding and shared identity (see Postmes, Haslam, and Swaab, 2005). Social organization can also include community leadership and civic engagement (Sampson and Graif, 2009), which may translate a community's shared values into desired outcomes, such as the creation of or changes in policy. Other measures of neighborhood social support are more similar to the emotional, instrumental, and informational support described among families and other groups. These include an individual's own relationship to the group—how attached an individual is to his or her community or neighborhood (Cohen et al., 1997; Meredith et al., 2011; Sampson and Graif, 2009), how many people he or she knows in the community (Cohen et al., 1997), and his or her sense of closeness to others (Lee, Draper, and Lee, 2001; Meredith et al., 2011).

Measures of social support in cyber communities and other dispersed communities have received less attention to date. Current studies of cyber communities have relied on simple measures of Internet use (Lebo, 2000; Kraut et al., 1998) and membership in cyber groups and social networks like Facebook or MySpace (Davila et al., 2010). "Imagined communities" are groups with which a person identifies and to which he or she feels a sense of belonging (Anderson, 1983), such as the African American community, the Jewish community, the gay community, or the military community. Most members of these communities never actually meet or have contact with one another, but they nevertheless identify with each other. Most published work on imagined communities is more theoretical than empirical and, as such, does not rely on observable measures. But self-identification with an imagined community indicates membership in that community, and this type of belonging could matter for a person's well-being.

Social networks have several structural characteristics that are related to their available level of social support (Heaney and Israel, 2002; House, 1981; Israel, 1982). Being structural, these characteristics go beyond the individual, accumulated characteristics of network members (Kennedy, Green, McCarty, and Tucker, 2011). The first characteristic is the level of *reciprocity* that exists within the network, which refers to the reciprocal exchange of resources between network members. The second characteristic is the *intensity*, or level of emotional closeness, between network members. Third, networks are distinguished by their *complexity*, measured by how many functions

a network serves for its members. Fourth, the *density* of a network accounts for the number of network members who know and interact with each other. Fifth, networks whose members are more demographically similar are characterized as being more *homogeneous*. Lastly, networks are distinguished by the amount of *geographic dispersion* between members.

Networks can be stronger or weaker sources of social support relative to how they are structured. For instance, emotional support and instrumental support are provided more readily by networks with higher levels of reciprocity and intensity, that are more homogeneous, and whose members have closer geographic proximity to one another (Berkman and Glass, 2000; Heaney and Israel, 2002; House, Umberson, and Landis, 1988; Israel, 1982). However, different network configurations can offer different types of support. While closer-knit networks are valuable for transferring emotional and instrumental support, networks that are larger and more diffuse and that are less emotionally intense can be stronger sources of informational support (Granovetter, 1973; House et al., 1988; Israel, 1982). Garnering such informational support may be especially useful during times of transition (Heaney and Israel, 2002), such as geographic relocation or military deployment.

Social Support and Its Link to Well-Being

The availability of social support has been repeatedly linked to better well-being. For instance, all-cause mortality is lower in the presence of social support (Berkman and Glass, 2000), and having at least one strong, intimate relationship predicts better health (Michael, Colditz, Coakley, and Kawachi, 1999). Moreover, emotional support has been more strongly and consistently linked to good health and better well-being than any other form of social support (see Israel and Rounds, 1987). Before we review the specific sources of social support and their connection to well-being, we consider a more general conceptual model of how social support influences physical and mental health.

Drawing from Heaney and Israel's (2002) conceptual model, we first note that the presence of social support and support networks are likely to have some direct influence on health because supportive social ties are a basic human need (Berkman and Glass, 2000). Also, the presence of support indirectly affects health by enhancing coping resources at the individual and community levels. For instance, access to more social support increases an individual's ability to solve problems and elevates his or her perception of control (Heaney and Israel, 2002). At the community level, higher resource exchange (reciprocity) can promote a community's ability to utilize resources and solve problems (Minkler, 2001), which can promote the health (and healthy behaviors) of its members. Social support can also lower the frequency and duration of exposure to stressors, which should promote better physical and mental well-being (Heaney and Israel, 2002). Finally, Heaney and Israel note that individual and community coping

resources may also serve as buffers in the face of stressful conditions, thus reducing the adverse health consequences associated with stress.

Social Support from Family and Its Link to Well-Being

Prior research has repeatedly found a robust connection between high relationship quality—a central measure of emotional family support—and increased well-being among both adults and children (Amato, 2000). For example, higher marital quality has been associated with better adult psychological well-being (see Proulx, Helms, and Buehler [2007] for their meta-analysis of studies linking marital quality to personal well-being). Additionally, parents in low-conflict, continuous marriages demonstrate more warmth, affection, and consistent authoritative discipline toward their children (Davies and Cummings, 1994), which has been linked to better child well-being (Hetherington and Clingempeel, 1992; Rossi and Rossi, 1990). More harmonious family relationships also have long-term effects. Adults who grew up in low-conflict families have higher average psychological well-being than those who grew up in high-conflict families (Amato and Booth, 1991; Amato and Sobolewski, 2001; Biblarz and Gottainer, 2000; Cherlin, Chase-Lansdale, and McRae, 1998; Furstenberg and Teitler, 1994), as well as higher socioeconomic attainment (McLeod, 1991; Ross and Mirowsky, 1999), closer relationships with their parents (Amato and Sobolewski, 2001; Aquilino, 1994; Silverstein and Bengston, 1997; Sobolewski and Amato, 2007), and more stability in their own adult intimate relationships (Amato and Booth, 1997; Belsky and Isabella, 1985; Bumpass, Martin, and Sweet, 1991). Previous research also suggests that the receipt of needed instrumental support—both financial and non-financial—is associated with higher well-being (Harknett, 2006; Henly, Danziger, and Offer, 2005).

The presence of family emotional support (e.g., having a close relationship with or knowing a family member you can go to with personal problems) has also been identified as a protective factor against the effect of stressors on family members' well-being (Amato, 2000). For example, having a close relationship to parents has been shown to be a protective factor for children against the loss of community ties related to geographic relocation (Gold, 1995; Hagan, MacMillan, and Wheaton, 1996). This is of particular relevance to military populations, as mobility is a common feature of military life. Also, the protective potential of parent-child relationships may be especially important for children facing the deployment of a parent, as child emotional and behavioral adjustment problems and poor academic performance have been found to be greater during times of parental deployment (Chandra et al., 2008, 2010). (Future research should consider, however, the possibility that closeness to a deployed parent may make deployment particularly difficult for the child.) As further evidence of the importance of family relationships, prior research shows that the negative influence of stressors on well-being is often indirect and frequently operates through compromised family relationships (e.g., Amato and Sobolewski, 2001; Conger et al., 1990, 1993; Sobolewski and Amato, 2005).

Social Support from Friends, Co-Workers, and Unit Members and Its Link to Well-Being

Previous research suggests that friend-based and work-based social support is associated with increased well-being. For example, people who have more support from friends report fewer depressive symptoms, a benefit that appears to operate partly through an enhanced sense of belonging (Laible, Carlo, and Raffaelli, 2000; McNeely and Falci, 2004). Similarly, work-related social support influences health and reactions to stress. For example, one study found that the availability of social support among those new to an organization was connected to better psychological health and positive adjustment (Nelson and Quick, 1991). Another study suggests that managerial support enhances employee well-being (e.g., Moyle, 1998).

Some research indicates that interpersonal bonds, or social cohesion, in Army units are associated with lower levels of psychological distress because they dampen the effect of stressful events (Brailey et al., 2007). However, unit social cohesion can have deleterious consequences as well. For example, interpersonal bonds in a military unit can contribute to work-family conflict in some circumstances (e.g., Britt and Dawson, 2005). This may contribute, in part, to the role conflict experienced by some in military populations. Related to work-family conflict, Burnam et al. (1992) found that long hours, frequent rotation, and frequent separation from family members was associated with lower well-being and lower perceptions of individual readiness among Army soldiers.

Other research suggests that military veterans who have emotional support, informational support, and more positive social interactions experience less depression (Bambara et al., 2011). One study examining data from the Veterans Health Study found that increased perceived access to emotional and instrumental support among veterans reduced the negative effects of non-military traumatic events on mental health—including PTSD—and physical health, but that social support was unrelated to the influence of military-related trauma on health (Ren et al., 1999).

Social Support from Neighborhoods, Cyber Communities, Imagined Communities, and Social Networks and Its Link to Well-Being

Access to neighborhood social support resources is associated with positive individual-level outcomes, including less depression and better physical health among adults and higher academic achievement and fewer behavioral problems among children (Stevenson, 1998; Ross, 2000). Meanwhile, lower levels of neighborhood social cohesion have been linked to more depressive symptoms among adolescents (Stevenson, 1998) and more health problems among adults (Hadley-Ives et al., 2000; Robert, 1999; Ross, 2000). Neighborhood disorganization, or the lack of neighborhood social ties, is also related to higher incidences of illicit drug use (Boardman et al., 2001) and poorer educational behavior among children (Bowen, Bowen, and Ware, 2002). Neighborhood-level social

support has been linked to higher psychological well-being and can buffer economically disadvantaged adolescents from psychological distress (Latkin and Curry, 2003; Ross, 2000).

However, while neighborhoods appear to have some influence on well-being, the effects of neighborhood social support have typically been modest, especially once family-level factors are considered (e.g., see Duncan and Brooks-Gunn, 1997). Yet again, the relative importance of neighborhoods and families depends on the outcome being considered. For instance, Bowen, Bowen, and Ware (2002) found that neighborhood social disorganization was more strongly related to adolescents' educational behavior than were family processes.

Little systematic research exists regarding the influence of cyber community and social media participation on well-being, and the available evidence is mixed. Early research on the influence of Internet use found that frequent use was associated with higher rates of depression (Kraut et al., 1998). However, longitudinal analysis of those data revealed that the effect dissipated over time (Kraut et al., 2001). A recent study of adolescents found that heavy use of social media sites such as Facebook is associated with higher rates of depression (Davila et al., 2010). The authors speculate that this may be related to high levels of rumination over social and romantic woes among frequent users, although it is unclear if these media sites actually promote rumination. Still, other research suggests that the use of social media can help people cope with trauma or tragedy (Sanderson and Cheong, 2010; Williams and Merten, 2009).

Based on social support research of other types of social interaction (e.g., in families or neighborhoods), it is reasonable to hypothesize that the potential benefits of belonging to a cyber network are contingent upon the relationships in those networks being positive. Moreover, the people in an individual's social media networks vary in their level of importance or influence for that person (Silenzio et al., 2009). Accordingly, the ability of social media networks to help a person deal with stress and loss may vary depending on the individuals in that person's networks and the quality of the ties he or she has with those individuals. In other words, just as is the case in face-to-face networks, some individuals in cyber networks may be more influential and provide more positive support than others.

Finally, the link between membership in cyber networks and well-being appears to depend on a person's prior levels of well-being. Some research suggests that Internet use is associated with better psychological well-being for extroverts and those who already had high social support. Conversely, introverts and those with less baseline support demonstrate less well-being when they use the Internet more frequently (Kraut et al., 2001).

In sum, online communities appear to be important sources of connectivity for some people, and these networks appear to have both positive and negative influences on well-being. More systematic research will be useful in expanding our understanding of social media as a source of social support, and their effects on well-being.

Although membership in an imagined community has not been systematically linked to well-being in empirical research, identification with imagined communities does appear to promote a sense of belonging (Anderson, 1983; McDowell, 2004). A sense of belonging, in turn, has been linked to positive outcomes, such as better health (Sarason et al., 1996). As noted earlier in the report, a sense of belonging is also posited as a key factor in preventing suicide (Joiner, 2005). If association with an imagined community increases such a feeling of belonging, then perceived affiliations may indirectly enhance individual well-being in a number of important ways. For instance, in keeping with Heaney and Israel's conceptual model (2002), a sense of community belonging may offer perceived social support that directly enhances an individual's psychological well-being (Berkman and Glass, 2000). This support can also help build individual coping resources, such as a perceived control over one's life and problem solving abilities that promote better mental health (Heaney and Israel, 2002). Finally, these coping resources can buffer individuals from some of the negative health consequences of exposure to stressors.

The structure of social networks can also enhance well-being. For example, positive mental health is more likely when one's networks are characterized by emotional closeness and reciprocity (Israel, 1982; House et al., 1988). Similarly, such network structure has been linked to better health outcomes (Christakis, 2004) and help-seeking behaviors (Pescosolido, 1992; Valente and Fosados, 2006).

Negative Aspects of Social Ties

Most research on the relationship between social ties and stress has focused on its positive aspects. However, social relationships can also be harmful, critical, or counterproductive and result in negative consequences for well-being (Hogan, Linden, and Najarian, 2002; Ruehlman and Karoly, 1991).² In fact, relationship conflict is more predictive of poor psychological outcomes than are the positive aspects of these relationships (Franks et al., 1992; Pagel, Erdly, and Becker, 1987). Also, one study found that the benefits of social ties for well-being are only present when those social ties involve positive affect and sociability (Rook, 1984). A related concern is that some support attempts may fail to help by either minimizing or catastrophizing the problem (Dakof and Taylor, 1990; Hemphill, 1997; Lehman and Hemphill, 1990). Even support that is primarily positive can have negative secondary effects. For example, assistance exchange can produce feelings of ambivalence between family members—both among those who give assistance as well as those who receive it. This ambivalence, in turn, negatively affects emotional closeness and may potentially lower well-being (Fingerman et al., 2006).

² House and colleagues refer to the negative aspect of social ties as “relational demands” (1988, p. 302).

Finally, social relationships can themselves be a source of stress. Disruption or dissolution of desired social ties can be stressful. Moving, death, conflict, divorce, and abandonment can all take a toll on a person's well-being, especially if other social ties are unavailable to help that person cope.

Summary

Emotional, instrumental, and informational support from families, friends, co-workers, fellow military unit members, neighbors, and other communities, and the structural characteristics of these social networks have all been linked to psychological, physical, and social well-being. The effects of social fitness at different group levels can also interact with each other to influence well-being. For instance, parental monitoring has been linked to fewer behavior problems among younger adolescents, but this effect was particularly strong in neighborhoods with higher levels of instability (Beyers et al., 2003). Stronger and more positive social ties and the availability of constructive help from others can enhance adjustment and protect people from some of the deleterious effects of stress. It is therefore important to understand the factors that facilitate or act as barriers to these forms of support.

4. Barriers and Bridges to Social Support

The factors that either facilitate or obstruct positive and beneficial forms of social support occur at both the individual and the group level. Although social support resources are typically understood as characteristics of the group itself (e.g., how cohesive a marriage or neighborhood is), the strength of a group's social resources is partly defined by the accessibility of those resources to its members (Portes, 1998). Additionally, a group's resources may not be equally accessible to all members and access can vary with individual traits (Paxton, 1999). This section identifies important intraindividual (i.e., within an individual) and interindividual (i.e., between individuals) factors that can either increase or decrease the availability of positive social support.

Intraindividual Factors

At the intraindividual level, some sociodemographic characteristics have been associated with enhancing the availability and efficacy of social support. For example, people with more education and income tend to have larger networks, more frequent contact with members of their networks, and more organizational involvements (Fischer, 1982; Mickelson and Kubzansky, 2003; Taylor and Seeman, 1999; Veroff, Douvan, and Kulka, 1981). There is also evidence that women have higher levels of perceived support (Swickert and Owens, 2010) and receive more actual social support (Lu and Argyle, 1992) than men. Women also give support more often (Kessler and McLeod, 1984; Spitze, 1986), but these studies provide no evidence that the *benefits* of received social support are more important for women than for men. There is some evidence that the *effect* of social support on well-being can depend on individual demographic characteristics. For example, the link between neighborhood disorganization (a dimension of social cohesion) and illicit drug use is stronger for those with lower incomes than for those with higher incomes (Boardman et al., 2001).

Personality and dispositional characteristics can also influence an individual's ability to establish and maintain social ties (House, Landis, and Umberson, 1988), which, in turn, influence the individual's access to social support through his or her relationships (Heller, 1979; Sarason, Sarason, and Shearin, 1986; Sarason and Sarason, 2009) and social networks (Kennedy et al., 2011; Tracy and Whittaker, 1990). Moreover, dispositional traits can skew one's ability to accurately perceive the support that is available (Sarason and Sarason, 2009). Prior research has shown that cognitive biases such as hostility, cynicism, negative thinking, and mistrust of others can negatively influence perceptions of social support (Gidron, Davidson, and Bata, 1999; Lakey and Lutz, 1996; Meredith et al., 2011) and lower the ability of that support to improve well-being (Lepore, 1995). Previous research also suggests that people who score higher in

personality hardiness have a stronger ability to build and make use of socially supportive relationships (Ouellette-Kobasa, Maddi, Puccetti, and Zola, 1985). Cacioppo and colleagues (2011) outlined nine personal resources that foster social resilience: (1) the capacity and motivation to accurately and empathetically perceive others, (2) a feeling of connectivity to individuals and collectives, (3) communicating care and respect for others, (4) perceiving others' regard for oneself, (5) having values that promote the welfare of others and oneself, (6) appropriately responding to social problems, (7) appropriately and effectively expressing social emotions, (8) trust, and (9) tolerance and openness. Those who possess these personal qualities should be in a better position to recognize, access, and benefit from social support resources.

It is important to note, however, that previous research finds an association between social ties and health that remains even when the influence of personality characteristics is taken into account (e.g., Schulz and Decker, 1985). This suggests that social and interpersonal factors are also important influences on the availability and benefits of social support (see also Cacioppo, Reis, and Zautra, 2011).

Interpersonal Factors

This section identifies the interpersonal bridges and barriers to social support. Greater cohesion and less estrangement are important foundations for the exchange of social support among group members. Bridges to social support include increased group stability, and more frequent, positive interactions and communication (face-to-face as well as other forms of interaction); barriers to social support include group discord and conflict, geographic separation, and ostracism. Each of these factors is discussed below.

One key way to facilitate access to social support is to promote positive cohesion and stability in the groups that give support. Among families, for instance, parents' divorce is associated with compromised parent-child relationships and weakened family ties (Amato and Booth, 1997; Peterson and Zill, 1986; Sun, 2001) that make accessing parents' social resources less likely (Coleman, 1988; 1990). More frequent and positive interaction and communication can help ensure group stability (Amato and Booth, 1997) and elevate emotional, instrumental, and informational support.¹ Promoting a shared sense of identity within a group can further strengthen cohesion and promote social support (Cacioppo, Reis, and Zautra, 2011). Keeping groups intact and encouraging communication and interaction—at least when they provide members with positive support—can facilitate higher levels of the support, which have been linked to increased well-being.

¹ The available empirical evidence has focused primarily on face-to-face interactions and has measured the frequency of interactions using scales ranging from “no interaction” to “daily interactions.” There is less evidence regarding, for example, cyber-interactions, and it is unclear whether there is a tipping point in the efficacy of interaction frequency.

Relatively low levels of discord and conflict in a group can also promote the availability of positive social support. Although some conflict is natural and necessary (i.e., the total absence of conflict likely signals disengagement), the reduction and healthy resolution of conflict should strengthen social ties through greater group stability (Amato and Booth, 1997; Sarason and Sarason, 2009) and exchange of social support (Coleman, 1988; 1990). It is also important to be aware of the stressors that can elevate group discord and compromise social relationships. For example, marital quality and parent-child relationships are weaker when families experience economic hardship (Conger et al., 1990; Sobolewski and Amato, 2005); and military deployment—especially combat deployment—has been linked to compromised parenting behaviors (Gibbs et al., 2011).

Also related to group cohesion is membership turnover. It is harder to maintain ties when members of the group (e.g., work group, military unit, neighborhood) change often or when members are absent for substantial periods of time (Fouth, Leventhal, and Brooks-Gunn, 2008). Within neighborhoods, residential stability—measured as duration of residence—has been linked to stronger personal ties (Turney and Harknett, 2010). Longer periods of residence in a neighborhood promote attachment to the community and engagement in social interactions and activities (Turney and Harknett, 2010). Similarly, social networks that are less geographically dispersed provide more affective and instrumental support to their members (Heaney and Israel, 2002). Conversely, the social isolation that may arise from family geographic mobility can compromise the availability of social support (Boisjoly, Duncan, and Hofferth, 1995). Geographic relocation and frequent migration in and out of combat units is a common and, often, unavoidable feature of military life (Cacioppo, Reis, and Zautra, 2011; Willerton, Wadsworth, and Riggs, 2011), but the military's emphasis on camaraderie over individual advancement can help to build a shared identity and fortify social ties.

Finally, bullying and ostracism keep some individuals from accessing important forms of social support. Targets of ostracism lose their sense of belonging and feel a threat-based need to repair that sense of belonging (Williams, 1997; 2001). Moreover, ostracism has been shown particularly deleterious for well-being, resulting in stronger emotional consequences than any other form of interpersonal conflict, such as arguments or confrontations (Zadro, Williams, and Richardson, 2005). Ostracism can also take the form of information exclusion (Jones et al., 2009), which compromises not only the target's sense of belonging, but also the information he or she needs to manage problems and succeed in tasks.

Bullying has been linked to similar negative consequences for its targets, including lower self-esteem, increased delinquency, and higher drug use (Carbone-Lopez, Esbensen, and Brick, 2010; Furlong et al., 1997), as well as psychological distress, depression, and anxiety (Hawker and Boulton, 2000; Rigby, 2003). Both ostracism and bullying, therefore, can undermine well-being both directly and indirectly through the weakening of an individual's sense of belonging and social connectedness, which are important features of social fitness.

5. Interventions to Promote Social Fitness

Having reviewed what we know about the factors that facilitate or obstruct social support, we now turn to a discussion of the types of interventions and efforts that should be made to promote the availability, exchange, and efficacy of that support. These include policies and programs that attend to the sociodemographic characteristics and dispositional traits that influence access to social support. Among these policies and programs are those that strengthen social groups, support networks, and teams; those that promote social skills and more frequent, constructive social interactions; and those that reduce conflict and group division.

Efforts Related to Intraindividual Factors and Social Support

Sociodemographic factors have been shown to impact the exchange of support and the relative importance of certain types of support. For instance, Nelson (2000) reported that exchanges of non-monetary instrumental support, such as fixing a broken car, are particularly salient strategies for coping with crises among the poor. This suggests that connecting economically disadvantaged individuals with networks used for exchanging in-kind assistance may augment efforts to improve access to non-monetary forms of support. Nelson notes, however, these exchanges may occur most effectively among natural support networks rather than among newly created groups. Therefore, efforts to promote reciprocity among existing kin and neighborhood groups may be more effective than building new exchange networks. This is particularly true when the provision of support is already present in these groups, since those who offer one form of support tend to offer others as well (Heaney and Israel, 2002; Sherbourne and Stewart, 1991)(see also Schweizer et al., 1998; Wellman and Wortley, 1989 below).

Another sociodemographic characteristic related to the exchange of support is gender. Prior work shows that women contribute the bulk of social support (Kessler and McLeod, 1984; Spitze, 1986), and some research finds that the benefits of this support are stronger when they come from women than from men (Glynn, Christenfeld, and Gerin, 1999). Hogan and colleagues (2002) note that this may mean women are particularly valuable resources for facilitating social support, but they also caution that this can place an unfair burden on women and unfairly exclude men from contributing support. Any policy decisions regarding the gender of supporters should consider these possibilities. Moreover, the stronger influence of social support from women is not necessarily a function of innate gender differences. It may have more to do with the fact that women have traditionally taken primary responsibility for care work and, thus, may have developed a greater capacity to provide effective care (Risman, 1987).

Hogan and colleagues (2002) also suggest that perceptions of social support should be a key focus of efforts to enhance support. Evidence suggests that perceptions of the availability of social support are related to the way individuals think of themselves in relation to others and to biases in how one interprets social situations (Lakey and Dickinson, 1994; Sarason et al., 1991; Sarason, Sarason, and Shearin, 1986); these perceptions are also related to some personality disorders (e.g., avoidant personality disorder and borderline personality disorder) (Hogan, Linden, and Najarian, 2002). Based on this evidence, cognitive strategies that address skewed perceptions of social support (e.g., thinking no one cares or would help) and efforts that target personality disorders may be helpful (Lakey and Lutz; 1996). Related to perceptions of support, Meredith et al. (2011) found that important individual-level factors include positive thinking, positive affect, positive coping, realism, and behavioral control. Interventions that target these factors are likely to improve psychological well-being and resilience. Personality disorders, however, are difficult to treat, and cognitive modifications may not address the complexities of perceived support. Lakey and Lutz note that perceived support is also influenced by one's social environment. For this reason, they argue that it may also be useful to promote relationship-building skills.

One current effort to build social resilience among troops in the U.S. Army is the Comprehensive Soldier Fitness program (Cacioppo, Reis, and Zautra, 2011). This is a computer-based program designed to foster social resilience by targeting the nine personal resources identified earlier in this chapter. Broken into four modules, the program first stimulates an awareness of these personal resources; then promotes tolerance and appreciation of differences within the unit or team; then informs soldiers of the importance of belonging, connectedness, and empathy; and finally focuses on building social skills and informs soldiers about techniques for creating alliances. The design of this program is evidence-based, although its effectiveness is still being tested.

Efforts Related to Interpersonal Factors and Social Support

Interventions aimed at promoting interpersonal social support factors for Airmen and their families should focus on increasing group cohesion and integration among families, friendship networks, co-workers, military units, neighborhoods, and communities so that these groups can more readily offer social support to their members. Such interventions should increase group stability, interaction, and positive communication; should decrease conflict and social ostracism; and should provide strategies for coping with unavoidable challenges to social connectivity, particularly geographic distance.

Efforts to strengthen close groups, such as families and friendship networks, must focus on group harmony as well as stability by promoting positive interactions, low levels of conflict, and constructive parenting practices. One program that has been implemented among military personnel is the Navy's Families OverComing Under Stress (FOCUS) program, a family-centered intervention that has adapted existing evidence-based

practices to help families draw on their strengths to manage the stressors associated with deployment and reintegration and to promote the positive adjustment and growth of family members (Lester et al., 2011). Specific efforts of this program include the learning and practice of emotional regulation, communication, goal setting, and problem solving among family members. FOCUS is embedded within a variety of service providers and aid agencies in the local community, making the program more accessible. Although the effectiveness of family communication and positive parenting practices has been evidenced in non-military communities (e.g., Amato and Keith, 1991; Davies and Cummings, 1994), the success of this program for military family well-being still needs systematic assessment.

The cohesion of co-worker groups and military units should also be emphasized using a similar focus on group integration, positive communication, and conflict resolution. Given the nature of these groups, efforts to improve cohesion should include a strong component dedicated to team-building and task accomplishment. As the literature suggests, however, programs attempting to foster more social cohesion among co-workers and fellow unit members must be mindful of the balance between emotional bonds and the goal of shared task completion, as these can sometimes compete with each other (e.g., Coulter, Lester, and Yarvis, 2010).

At the neighborhood level, social integration and the stability of networks can be enhanced by the creation or maintenance of spaces that promote interaction between community members. Examples include community centers and other easily accessible gathering places, such as recreation centers, barbershops, childcare centers, libraries, places of worship, hospitals, and gyms (Sarason and Sarason, 2009; Small, 2006). Strengthening communities both on and off installation can enhance social support for Airmen and their families.

Social network and support interventions include enhancing existing network linkages; developing new network linkages to offer support when existing networks are small or overburdened, enhancing networks by relying on natural helpers who are more likely to be trusted by and responsive to network members, community capacity building and problem solving to forge new ties and strengthen existing ties, or some combination of these strategies (see Heaney and Israel, 2002).

Geographic relocation is an ever-present challenge for military personnel and this challenge can make social cohesion more difficult to attain. One important resource for navigating frequent moves and substantial physical distance from family, friends, and other support networks is the Internet. The Internet can be a powerful tool for linking Airmen and their families to sources of emotional and informational support (Jerome et al., 2000). Helpful online resources can include support groups, chat rooms, family education sites, information-sharing sites, service-sharing sites (e.g., ridesharing), and unit sites that may connect unit members more easily. In addition to increasing social support for those who have experienced geographic relocation, online groups may be especially useful for those who have difficulty accessing face-to-face support for other

reasons, including physical injuries or limitations, residence in rural areas, or the wish to maintain anonymity (Davison, Pennebaker, and Dickerson, 2000).

Finally, it may also be useful to inform unit leaders about the potential importance of access to particular technologies, such as texting and instant messaging, as these media have been shown to be particularly important for the development and maintenance of social ties (Quan-Haase and Young, 2010).

Attempts to promote social cohesion and increased social support should also bear in mind that people tend to rely on different sources for different types of support (Schweizer et al., 1989). For instance, research suggests that immediate kin are more important for certain aspects of emotional support, such as discussing significant personal issues and getting advice on major life decisions, and for instrumental support, such as caring for a sick relative or child (assuming they live nearby). Support from friends, however, tends to be more concentrated on emotional support in the form of companionship and socializing. Based on this, it is advisable to connect people with social support in a way that accounts for the particular type of support needed and the availability of different sources of support.

Efforts Related to the Influence of Social Support on Well-Being

Based on their review of the research on social support interventions, Hogan, Linden, and Najarian (2002) provide tentative evidence that interventions that increase social support from family, friends, and peers are beneficial for individuals' well-being. They also note that the benefits of support are more pronounced when reciprocity is present (see also Revenson, 1990), since unequal exchanges of support can lower self-esteem and positive affect. This suggests that mutual exchanges should be emphasized in programs that promote social support and well-being. Hogan and colleagues note that group interventions are a good format in which to enact reciprocity.

The benefits of social support also appear to depend on the relationship between the supporter and supported. For example, Christenfeld et al. (1997) found cardiovascular reactivity to stress was decreased by the presence of supportive friends, but not the presence of supportive strangers. Another study reported that blood pressure decreased during stress in relation to the closeness of the friend providing support (Kors, Linden, and Gerin, 1997). These examples provide further evidence that efforts to promote social support should rely on persons from an individual's natural support network (Hogan, Linden, and Najarian, 2002) whenever possible. Hogan and colleagues recommend including the natural support network in the intervention and/or improving the quality of existing relationships within that network. They further note that integrating family and friends into support interventions may be especially helpful in cases that require prolonged support due to crisis or high levels of stress.

It is also important to ensure that social support interventions are actually helpful and do not involve critical or unpleasant interactions. The forum in which support is offered

is one potential area of concern. For example, although they can be a valuable source of support and inspiration, peer support groups may overemphasize or reinforce a stigmatized group identity (Coates and Winston, 1983) or may engender unhealthy group comparisons (Buunk et al., 1990), both of which can compromise well-being. Revenson (1990) also argues that support will only be beneficial when the individual is receptive to help, which means the timing of support can influence its efficacy. For instance, mandatory family support groups were found to have negative effects on participants (Bell et al., 1997). Forced help is not help.

Finally, interventions and support programs for Airmen and their families must take military culture and the unique challenges of military life into account during their design and implementation (Lester et al., 2011). Such programs should also utilize existing military resources and services whenever possible and should foster communication between these agents to enhance their effectiveness.

6. Conclusion

In this report, we have identified social support as a central element of social fitness and have reviewed prior research on the key sources of social support and its influence on well-being. Finally, we have reviewed the factors that facilitate or obstruct positive social support and have made recommendations for promising interventions that can increase the facilitation of support. Our review has shown the importance of families, friends, co-workers, unit members, neighborhoods, and other communities for the provision of emotional, instrumental, and informational support. Our review has also demonstrated the link between these various forms of support and psychological, physical, emotional, and social well-being.

The findings reviewed in this report suggest that each type of social group has valuable support to offer Airmen and their families, although family support appears to be particularly important for well-being. Therefore, while efforts to promote social fitness should direct resources toward multiple sources of support, they should place particular emphasis on the promotion of family connections and cohesion as they can elevate the transfer of family social support and bring especially strong benefits to Airmen and their families.

In general, group cohesion and integration, enhanced positive communication, and the reduction of conflict and social isolation should be key targets of intervention efforts, as they promote an atmosphere in which social support is more likely to be transferred to group members. Intervention efforts should also attempt to reduce the negative aspects of social ties, as they may be especially predictive of poor psychological outcomes and because they may minimize or catastrophize the problem, thus counteracting the benefits of support. Geographic mobility, a necessary aspect of military life, is a significant challenge to social cohesion. The Internet may serve as an important source of alternative ways to stay connected and to access social support, despite relocation and separations.

Also, we have identified several factors that increase the benefits of social support, including the management of certain personality traits, the promotion of relationship skills, and the encouragement of reciprocity in social support exchanges.

The primary lesson learned from this review is that social fitness for Airmen and their families is based in the promotion of emotional, instrumental, and informational support, which themselves are more attainable when social integration and group stability are high and discord and social isolation are low. Building ties among families, peer groups, and communities that can offer social support will enhance the levels of well-being among these families, who face unique and formidable challenges.

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