

Understanding infidelity in military families

by

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Abstract

The military has five domains that they describe as personal readiness: social, emotional, physical, family preparedness, and spiritual. These five domains are what the military believe to be important for a service member to be “fit for duty.” This study plans to analyze secondary data with a divorced military-affiliated population and compare the differences in personal readiness between service members who described infidelity as a cause of their divorce and those who have not. The measures used in this study replicate personal readiness and were used as variables within the study to compare the two groups using independent t-test samples. Additionally independent samples t-tests were run to see the if post-traumatic stress, ACEs, and combat trauma were present between to the two groups and how prevalent. While all were present within the sample, this study provides discussion on the results and future directions researchers should take.

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Dedication

To my friends Patrice, Brittany, Kie, Des, Miaya, McKenzie, and Allie, thank you for your endless support. To Kathy and Frank, thank you for all you have done for me that prepared me to be able to accomplish the things that I have. To Khyllani, my goddaughter and all of my siblings, thank you for being my motivation.

Chapter 1 - Literature Review

Infidelity is a common occurrence amongst military relationships. Balderrama-Durbin et al. (2017) studied married service members across a year-long deployment and found that 75% of the sample that experienced infidelity divorced their partners when they returned from the deployment. This study also found that deployments may cause additional stressors that make service members more vulnerable to infidelity (i.e., limited communication and physically being away). Gimbel and Booth (1994) found that combat deployments do not directly affect marriages or cause infidelity, but combat deployments do perpetuate post-traumatic stress symptomology in service members and affects marital stability, that in turn, may result in a greater likelihood of infidelity occurring. Despite this, research indicates that infidelity is one of the most prevalent causes for divorce (Apostolou et al., 2019). For military families, this can be particularly concerning as extra-marital sex and divorce occur more in veterans than nonveterans (London et al., 2012).

The high prevalence of infidelity amongst this subpopulation is particularly concerning, as Monk and colleagues (2019) found that the speculation of infidelity in military relationships caused psychological distress. Speculation was described as one having thoughts of their partner committing infidelity against them or having reason to believe that their partner did but not having the evidence to conclude that infidelity actually occurred. Kachadourian et al. (2015) found that service members who experienced infidelity during a combat deployment experienced negative psychological outcomes post deployment (i.e., depression). Balderrama-Durbin (2017) and colleagues concluded that service members who experienced distress in their relationship during a deployment increased the chances of infidelity occurring, and once infidelity occurred it served as a “catalyst for divorce” post-deployment in this population. Foran and colleagues

(2013) mentioned that divorce was associated with mental health symptomology in a population of deployed service members.

Impacts of Trauma on Military Families

Service members can be exposed to combat during their time in the military being that the military is used as a force to fight (Congressional Research Service Reports (CRS), 2020). When someone joins the military, it is known that combat may be experienced and is stated in the oath. Combat can be described as a fight between two entities where disruption or destruction occurs to an opponent (Joint Chiefs of Staff, 2021). Combat deployments can expose service members to a number of things (i.e., firing weapons, death, and chemical agents). Deployments can be combat or non-combat, but ultimately both causes service members to be separated from family for an extended period of time (Gimbel & Booth, 1994). Combat exposure is highly correlated with anxiety, stress, and other psychological outcomes (Gimbel & Booth, 1994). Pereira (2002) found that combat exposure is a correlate of post-traumatic stress in both male and female veterans, but the likelihood of female veterans being diagnosed with Post-Traumatic Stress Disorder (PTSD) is much lower, suggesting it may be underdiagnosed.

Adverse Childhood Experiences (ACEs) are traumatic events that are experienced between the ages of 0-17 years and include (but is not limited to) experiencing abuse, having a caregiver with mental health issues, or witnessing violence (Centers for Disease Control and Prevention (CDC), 2021). Laird and Alexander (2019) looked at the prevalence of ACEs in 898 veterans and found that 85% of the sample had experienced at least one ACE. Furthermore, the study found that 70.4% of the veterans had experienced two or more ACEs, and over 50% had experienced three or more (Laird & Alexander, 2019). Morgan and colleagues (2021) stated that veterans who had experienced more than 3 ACEs without combat exposure were more likely to

have negative mental health outcomes (i.e., PTSD, anxiety, and depression). Brewin and colleagues (2000) found that ACEs could predict PTSD in service members.

However, the presence of ACEs and Combat Related Traumatic Experiences (CRTEs) does not occur in isolation. In a study conducted by Sareen and colleagues (2012), it was revealed that ACEs were associated with deployment-related traumatic exposures, and in turn with anxiety and adult mood disorders. Morgan and colleagues (2021) found that service members who were exposed to ACEs and combat trauma showed higher rates of negative psychological outcomes than service members who had only experienced ACEs but no combat exposure. Additionally, exposure to ACEs has a strong correlation with negative psychological outcomes and increases the risk of experiencing PTSD (Morgan et al., 2021).

Some researchers have associated the experience of infidelity with the criterion for PTSD. PTSD is the diagnosis of a trauma or stress-related disorder (Ruglass & Kendall-Tackett, 2015) and clinically features a set of criteria that when met, suggest that the individual is experiencing significant distress. Criterion A is broken down into two categories: (a) direct exposure, witnessing the traumatic event, or a person's life is being threatened; and (b) a person's response includes fear, helplessness, or horror (Ruglass & Kendall-Tackett, 2015). The additional criteria for being diagnosed with PTSD as stated in DSM-5 is broken down into four clusters: intrusion symptoms or re-experiencing a traumatic event (Criterion B), avoidance (Criterion C), negative alterations in cognitions and mood (Criterion D), and arousal (Criterion E; Ruglass & Kendall-Tackett, 2015).

Marriage and Divorce Amongst Service Members

Many factors go into being an active-duty service member in the United States military. Each branch has a specific purpose, but overall, a united mission is to safeguard the United

States from all threats (USO, 2020). Service members need to be ready to train, deploy, and go to war at any point in time. Typically, extensive training and deployments can range from 6 to 12 months at a time (United Service Organizations (USO), 2020). Amongst the Army, Navy, Marine Corps, and Air Force, 50.7% of this population's active-duty service members are reported as married based upon recent federal reporting (Department of Defense (DOD), 2019). In the Reserve and Guard 49.7% of their service members are annotated as married. Being that spouses and dependents are not allowed to go to training exercises (i.e., National Training Center (NTC) and Joint Readiness Training Center (JRTC)) or combat deployments with service members, this is time spent away from their families. Service members also deal with relocations and temporary duty assignments that may cause strains on their marriages. Additionally in 2019, 4.7% of active-duty service members reported to be divorced and 6.5% were reported to be divorced in the Reserve and Guard (DOD, 2019). Research indicates that marriages amongst military families are at increased risk for divorce in comparison to the general population (Newby et al. 2005).

Infidelity and Divorce

Infidelity can be described as “a violation of a couple’s assumed state or stated contract regarding emotional and/or sexual exclusivity” (Weeks and Gamescia as cited in Smith, 2011); however, there is debate and variability surrounding the nature of infidelity. Generally, infidelity is sub-divided into three main categories: physical, emotional, and physical-emotional (Blow & Hartnett, 2005). Physical affairs involve different types of sexual activity and physical touching (e.g., kissing, holding hands) outside of one's relationship. Emotional affairs can include things such as lying to one’s partner about how they feel about someone else, spending more time with someone else outside of their partner, attending important events together, and becoming

attached to someone outside of their relationship in hopes that an actual relationship or sexual relationship may come of it (Guitar et al., 2016).

Furthermore, although there are numerous ways emotional affairs can begin, Blow and Hartnett (2005) found that the internet and work are some of the more common ways. Physical affairs can lead to an emotional connection with the new sex partner and ultimately results in a physical-emotional affair that can increase the chance of divorce (Preveti & Amato, 2004). Kitson and Holmes (1992) found that outside relationships can be a highly attributable factor in a decision to divorce (i.e., the physical and emotional relationships listed previously). Infidelity has been documented as an extremely damaging experience for couples, and counselors have found it difficult to treat (Peluso & Spina, 2008). When infidelity occurs in marriages, it can cause a partner to seek divorce, and studies have shown that in many relationships, one or both of the partners have affairs, and this can result in the relationship ending. Typically, in these situations, divorce is sought out of anger by the offended partner and because of their anger and the emotional turmoil caused, it can be hard for the offended partner to make rational decisions (Ortman, 2005). Snyder et al. (2011) found that 50-60% of military service members had sought counseling due to infidelity. South and Lloyds (1995) conducted a study on divorced individuals and found that over one-third of their participants admitted that either they or their spouse engaged in sex outside of their marriage before the marriage ended. Cano and O'Leary (2000) found that individuals who experienced infidelity in their marriage were six times more likely to have depression symptomology or anxiety as a result compared to individuals who had not experienced infidelity in their marriage.

Theoretical Framework: Stress Process Framework

According to Pearlin et al. (1981), stress arises from two primary sources: eventful experiences/life strains and chronic strains. Eventful experiences are experiences that initiate change in an individual's life and force them to readjust. A distinguishing feature of these experiences are that they occur for a finite period of time. Chronic strains are often tied to these eventful experiences. These events vary in magnitude but ultimately can produce stress in a person's life (Pearlin et al., 1981). Eventful experiences are often tied to changes in an assortment of social roles (social roles may involve being a parent, romantic partner, employee, etc.). For example, someone who has experienced infidelity may want their partner to leave the house, which could then increase their responsibilities for maintaining the household, force a readjustment of roles related to parenting if there are shared children, and cause changes to the social support network one has available to them.

When more persistent and wide-ranging strains accompany an eventful experience, this phenomenon is referred to as stress proliferation (Pearlin & Bierman, 2013). Further, the hurt of or reflection on the infidelity could consume the individual's mind, leading them to be less present in other areas of their life, potentially creating additional stress, or in the case of service members, putting themselves or others in harm's way by not being at their peak performance levels. Such proliferation may be dangerous for service members and their families, given the nature of their occupation. Theoretically, this aligns with the notion that in many cases the secondary stressors one experiences may have an even more profound or damaging long-term impact than the primary stressor itself. For military families, the conceptualization of general wellness associated with military readiness may thus be a useful framing as an outcome under this perspective.

With there being five domains of personal readiness, there is a possibility of what Pearlin and Bierman (2013) describe as spillover occurring. Spillover is another form of stress proliferation but is more specific to the transfer of stress from one domain to another (i.e., relationships into the workplace). Infidelity could be acting as the primary stressor for a service member. Stress may arise from role restructuring within the family, emotional changes as a result of the infidelity, and the demands of the military continuing. As a result of the primary stressor, stress proliferation has then occurred.

As it applies to the study of infidelity, a stress process approach might consider that the infidelity itself can be a stressor, with the related fallout operating as a chronic strain and ultimately affecting readiness, exasperating the effects through the process of stress proliferation (Pearlin, 1989). An individual who has experienced infidelity may have flashbacks, nightmares, or sleepless nights following the experience. How stress is handled will depend on the individual's resources. Resources are the people or things a person may rely on during the time they are experiencing distress that may help mitigate it. An individual may have social resources which would be their family, friends, or coworkers. In other words, for a person who has experienced infidelity their social resources would be anyone they could trust going to about the situation, like their parent, who would provide them with sound advice or listening ears. There are also personal resources (e.g., self-esteem and mastery), where a person looks to themselves to navigate the stress that they may be experiencing. A person who has experienced infidelity may believe that the infidelity was their fault, or they may believe that they have no control over why it happened. In terms of infidelity, a services member's resources may predict if their readiness will be affected. Han et al. (2014) found that social supports are extremely important in military populations and have the ability to decrease PTSD-like symptoms in service members.

The experience of infidelity can be considered a life strain or unscheduled event that ultimately creates or increases the experience of stress through new or intensifying secondary stressors or through the proliferation of stressors (Pearlin, 1989; Pearlin & Bierman, 2013). As noted above, it is possible that such strain presents as a function of other experiences intrinsically tied to the experience of military life. Situated within an examination of this population, it is important to go beyond the most commonly assessed outcomes of stress, which include psychosocial constructs like anxiety and depressive symptomology (Pearlin & Bierman, 2013), and rather consider a more holistic approach to the well-being of military families, seeking to determine if dimensions of personal readiness are affected by the experience of infidelity in this population. It will be important to note that even though infidelity can be viewed as a disturbing or stressful event, Pealin (1991) argues that stress affects everyone differently, so individuals who have experienced infidelity may all have different outcomes.

The Effects of Infidelity

Theoretically, the experience of infidelity, acting as an eventful experience that will likely result in the proliferation of additional stressors, should have a profound impact on well-being over time. There is an emerging phenomenon that has found infidelity can cause depressive symptomology, nightmares, flashbacks, and many other reactions paralleling symptoms of those who have experienced PTSD (Ortman, 2009). While infidelity is not a part of the DSM and is not actually considered a disorder, Ortman's phenomenon gives researchers an additional perspective in understanding the effects of infidelity though the concept is not commonly used. Kachadourian et al. (2015) also found infidelity to be associated with post-traumatic stress and associated symptoms, psychological disorders in service members who had experienced infidelity, and additional stressors post deployment. Roos et al. (2018) found that

when PTSD-like symptoms occur from infidelity, infidelity can then be associated with depression and anxiety symptoms. PTSD is said to include feelings and experiences such as emotional numbing, anxiety, rage, fear, and helplessness (Ruglass & Kendall-Tackett, 2015). Because the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) does not consider the experience of infidelity to be a traumatic event because it does not cause injury, threaten one's life, or involve death, this allowed Ortman (2005) to establish the phenomenon, Post Infidelity Stress Disorder. As previously mentioned, this phenomenon is emerging and not heavily researched, for the purposes of this study it is only showing the connection between the phenomenon and symptomology of PTSD.

Ortman's phenomenon is based on the understanding of what trust and mistrust mean to an individual at a certain stage of their life cycle. In other words, as individuals get older, they can be more likely to trust, and because infidelity is a form of betrayal, it has a higher chance of negatively affecting someone depending on their stage in the life cycle. Relationships and love are associated with trust while withdrawing from others is associated with mistrust (Ortman, 2005). Individuals are in a vulnerable state when it comes to relationships and love and believe that their partner will be loyal to them, which is why affairs are a form of betrayal of trust and can be considered traumatizing because of the unexpectedness of the event (Ortman, 2005).

Trauma can be considered an abnormal occurrence, therefore, to a faithful partner, infidelity can potentially be that abnormal occurrence. Just as when someone experiences the shocking and unforeseen event that causes their PTSD, infidelity is the unexpected betrayal that causes the PTSD-like symptoms. Furthermore, individuals diagnosed with PTSD have triggers or things that remind them of their traumatic event, similarly Ortman (2005) states that individuals who have been cheated on may experience triggers as well. For example, the offended partner

will often try to avoid references to or reminders of the experience or event, such as not cooking certain foods that are associated with bad memories, or they will avoid going places or avoid friendships that were connected to the partner who committed the infidelity. In a study conducted by Laaser and colleagues (2017), 61% of the women (majority married or remarried) who experienced infidelity met the PTSD requirements in DSM-5, and their traumas paralleled with Criterion A traumas (direct exposure to trauma or the response to trauma). Roos et al. (2018) specifically used measures that included criteria from DSM-5 and found that that the experience of infidelity was tied to probable PTSD, as well as depressive symptoms and other psychological effects (i.e., anxiety and perceived stress). Furthermore, Campbell and Renshaw (2013) conducted a study on PTSD symptoms in service members and relationship distress and concluded that PTSD can cause emotional numbing that results in additional relationship stressors. Roos and colleagues (2018) also found that in their study, 45.2% of participants (who were unmarried) met the cut-off to be diagnosed with PTSD when infidelity was looked at as a trauma. Both Lasser et al. (2017) and Roos et al. (2018) looked at relational betrayal and also allowed for participants to identify the infidelity that was experienced (physical or emotional).

Stressful events can cause changes in an individual's well-being. Atkins and colleagues (2010) found that in a study with 385 couples, 145 of the couples sought out therapy due to infidelity. The study also found that the couples who had experienced infidelity were more distressed, had more depressive symptoms, and saw the most improvement once therapy was complete. Azhar et al. (2018) found that women who experienced infidelity and had no prior diagnosis of depression were diagnosed with depression within the first month of finding out about their partners infidelity. Researchers conducting the study also found that infidelity was

associated with depression symptoms, anxiety, and stress. Knowing that psychological effects are so prevalent may be important for future researchers and military leaders to note.

Well-Being Amongst Service Members: The Importance of Readiness

In the military, there are two types of readiness, that make up *total readiness*: unit readiness and personal readiness (CRS, 2020). Unit readiness consists of soldiers being properly trained and capable to conduct and complete missions during combat deployments (CRS, 2020). Personal readiness includes multiple dimensions that need to be sustained: physical, emotional, spiritual, social, and family preparedness (Army Resilience Directorate, 2015). Readiness allows for service members to be prepared for the stressors of the military and increases their ability to adapt. Readiness also ensures that service members are taking care of themselves and their families. This study will focus on personal readiness and how it may be affected. The conceptualization and operationalization of readiness factors for purposes of this study is provided in Table 1.

Social Supports & Family Preparedness

Research indicates that the more unit support (i.e., coworkers, leadership) a service member has during a deployment, the less PTSD-like symptoms they possess at post-deployment (Han et al., 2014; King et al., 2006). Further, McGraw et al. (2012) found that amongst a sample of 427 male soldiers, a lack of social supports was detrimental in the ability of service members to provide the vital function of their jobs. It is important for this population to have individuals to talk to and that understand what their experiences may be like. Service members' psychological well-being can be dependent on their family's well-being (Zanotti et al., 2016). Further, properly preparing families for deployments caused lower anxiety for service members, whereas negative family related issues pre-deployment and during caused service members work to be less

efficient and increased their chance of experiencing anxiety (Zanotti et al., 2016). Bowles and colleagues (2015) mention that social supports are extremely vital for service members in order to reduce psychological outcomes, PTSD symptoms, and other traumas. Family preparedness and social supports are essential to service members' personal readiness based on prior research (Monk et al., 2019; Zanotti et al., 2016).

Emotional

Service members' psychological well-being can affect readiness depending on if the outcomes are positive or negative. McGraw et al. (2012) mentions that good psychological well-being is important for service members, especially if they have to endure a deployment. Sheerin and colleagues (2018) found when looking at service members who were deployed, PTSD symptoms were more likely to be associated with the population as well as negative coping styles (i.e., being avoidant with others). Kachadourian and colleagues (2015) associated Post-Traumatic Stress Symptomology with long term effects of depression symptomology and other mental health outcomes when soldiers returned from deployments and dealt with follow-on stressors (i.e., family and marital issues). Service members' mental well-being is at-risk when infidelity and/or post-deployment stressors occur (Kachadourian, 2015).

Physical

A service member's ability to do their job efficiently is a big part of their readiness. In a combat zone, if a soldier is unfocused or improperly trained it could put their life and others' lives in danger. Kachadourian et al. (2015) mentioned that the experience of infidelity causes PTSD-like symptoms and can have physical effects on a service member which ultimately affects their ability to do their job. Vogt and colleagues (2020) were able to conclude that enlisted and officer veterans showed physical and mental health conditions as a result of their

time in service. Lack of sleep, fatigue, and other symptoms can alter awareness, decrease physical fitness, and possibly decrease the quality of work that the service member is putting out. Bustos and colleagues (2021) found that the demands of physical activity within the military are associated with fatigue and high levels of stress.

Spiritual

Sterner and Jackson-Cherry (2015) conducted a study on the spirituality/religion (S/R) of service members and how it related to their combat deployment. The authors were able to conclude that service members who engaged in more S/R activities had better coping skills than service members who did not. Spirituality has been found to decrease PTSD symptoms, anxiety, and depressive symptomology in service members who engaged in it (Bowles et al., 2015). Chaplains can be associated with the spiritual domain of the military and have also been deemed as an asset to the military when it comes to mental health care in deployed service members (Besterman-Dahan et al., 2012).

Table 1. Conceptualization and Operationalization of Readiness

Dimensions of Readiness	Conceptualization	Operationalization
Social Supports & Family Preparedness	Social Support	Related Satisfaction Subscale of the Basic Psychological Needs Scale
Emotional	Anxiety; Depressive symptomology; Self-Efficacy	Beck Anxiety Inventory; Center for Epidemiologic Studies Depression Scale; General Self-Efficacy Scale
Physical	Physical Functioning	SF Mental Health Survey
Spiritual	Spirituality	Faith Activities In The Home Scale

‘Basic Psychological Needs Satisfaction and Frustration Scale – Related Satisfaction subscale’

Current Study

This study utilizes a stress process perspective (Pearlin et al., 1981) to explore the relationship between infidelity, which has contributed to divorce and the affects it may have on dimensions of readiness. Additionally, this study will seek to understand the role infidelity plays in post-traumatic stress levels in service members. The following research questions will be examined:

RQ1: Does the presence of infidelity, as an attributable cause for divorce, contribute to post-traumatic stress amongst military service members?

RQ2: How do dimensions of readiness differ in service members who have experienced infidelity versus those who have not?

RQ3: Do levels of personal readiness and post-traumatic stress levels further differentiate on the basis of discrete stressors like childhood trauma and combat-related traumatic experiences?

Chapter 2 - Methods

Sample

This subsample is drawn from a larger data collection, the Coparenting Across Households study. The current study utilized a subsample of 94 participants who had military affiliation and were divorced within the prior two years. This secondary data analysis was approved by the Kansas State University Institutional Review Board (see Appendix A). The average age of participants was 32 years of age ($SD = 7$), with the youngest participant being 23 years old and the oldest being 55 years old. Of the participants, 74.5% of the participants identified as male and 25.5% identified as female. Next, 59.6% of participants identified as White, 30.9% as Black or African American, 6.4% as Hispanic or Latino, 2.1% as American Indian or Alaskan Native, and 2.1% as Asian. A majority of the sample had a 4-year degree

(56.4%), 33% had a professional degree, and the rest had a 2-year degree, some college, trade school/technical school, or a high school diploma/GED. Additionally, 20% of the sample had identified infidelity as a cause of divorce while 80% had not mentioned infidelity being an attributable cause of their divorce.

The military-affiliation varied among the subsample. A majority of the sample were affiliated with the Army with 51.1% identifying their affiliation with that branch, 13.8% Navy, 10.6% Air Force, 8.5% Marines, and 7.4% Coast Guard. For those that are or were service members themselves, 48.9% of the sample identified as Junior-Enlisted, 10.6% Non-Commissioned Officers, 12.8% Commissioned Officers, 55.3% identified as active-duty, 11.7% retired, 6.4% reserve, and 5.3% described another option.

Measures

Infidelity

The Cleveland Marital Complaint Code involves a series of open-ended questions that are meant to assess a participant's attributions about the cause of divorce (Kitson & Holmes, 1992). Specifically, in this study participants were asked to list the top three reasons for the cause of divorce, using the following prompt: "What caused your relationship to break up?" Coding was conducted by three researchers (the author, a faculty member, and an undergraduate research assistant) independently, with each researcher noting whether or not the response indicated infidelity. Upon completion of individual coding, ratings were discussed and refined until consensus was reached. A Cohen's Kappa (κ) coefficient was then calculated to measure the inter-rater reliability. Overall, agreement was near perfect ($\kappa = .91$), based upon recommendations from the literature (Zach, 2021). 18 participants (20%) noted infidelity as one

of the primary causes of divorce. It is important to note that there was no clarification on if the 20% committed the infidelity or had the infidelity committed against them.

Readiness

Social Support. The Relational Satisfaction subscale of the Basic Psychological Needs Satisfaction and Frustration Scale (BPNSF; Chen et al., 2015) was used to measure social supports in the sample. The subscale demonstrated adequate reliability ($\alpha = .86$; $M = 2.95$; $SD = 0.54$). Items were answered on a 4-point scale ranging from 1= *Not at all true* to 4= *Completely true*, with items that include “I feel that the people I care about also care about me” and “I feel close and connected with other people who are important to me.”

Spirituality. The Faith Activities In The Home Scale (FAITHS; Lambert & Dollahite, 2010) measures the frequency and importance of religious practices. For the purposes of this study an 8-item subscale only measuring frequency was used. On a 5-point scale ranging from: 0 = *Never or not applicable* to 4 = *Always*. Items in this scale included, “Family religious gathering/activities/celebrations,” and “Family religious conversations at home.” FAITHS showed acceptable reliability ($\alpha = .73$; $M = 3.63$; $SD = 0.83$).

Physical Functioning. The SF Mental Health Survey (Ware & Gandek, 1994) is a 9-item scale that participants answered in regard to how the activities now limited them and how much. The prompt for this scale was “The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?” For the purposes of this study, service members responded to the Physical Functioning subscale items that included, “Lifting or carrying groceries” and “Walking more than a mile.” With responses ranging from 1 = *Not at all* to 3 = *Yes, limited a lot*. Additionally, the bodily pain subscale asked participants “During the past 4 weeks, how much did pain interfere with your normal work

(including both work outside the home and housework)?”. Items in this subscale included “intensity of bodily pain” and “extent pain interfered with normal work” with a scale ranging from 1 = *Not at all* to 5 = *Extremely*. The SF Mental Health Survey showed acceptable reliability ($\alpha = .83$; $M = 2.11$; $SD = 0.45$).

Emotional. Two measures were used to examine mental impacts. First, a 7-item short-form of the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977; Cole et al., 2004) measures feelings of depressive symptomology experienced in the last two weeks. Responses were on a 4-point scale ranging from 0 = *Rarely or None of the Time* (Less than 1 Day) to 3 = *Most or All of the Time* (5-7 Days). Items include, “I felt that I could not shake off the blues even with help from my family or friends” and “I had trouble keeping my mind on what I was doing.” CES-D showed acceptable reliability ($\alpha = .84$; $M = 19.43$; $SD = 4.87$)

The General Self-Efficacy Scale (GSES-12; Bosscher, 1998) is an assessment of the self to measure one’s initiative, effort, and persistence. A 5-point Likert scale is used ranging from 1 = *Strongly Disagree* to 5 = *Strongly Agree*. Sample items include “When I have something unpleasant to do, I stick to it until I finish,” and “Failure just makes me try harder.” The GSES-12 showed acceptable reliability ($\alpha = .64$; $M = 2.98$; $SD = 0.51$).

The Beck Anxiety Inventory (BAI; Beck et al., 1988) was used to measure the prevalence of anxiety. The 10-item scale showed acceptable reliability ($\alpha = .89$; $M = 2.71$; $SD = 0.71$). Participants answered items on a 4-point Likert scale ranging from 0 = *Not at all* to 3 = *Severely-it bothered me a lot*. Sample items include: “Fear of losing control,” and “Hot/cold sweats.”

Stressors

The Adverse Child Experiences International Questionnaire (ACE-IQ; World Health Organization, 2011) was used to measure childhood trauma. All questions ask the participant to

respond retrospectively and reference their experiences before age 18. This scale breaks down into two subscales, each using different scaling: (1) Household alcohol or substance abuse, household mental health problems, parental incarceration, and parental divorce using a scale ranging from 1= *Yes* to 3 = *Not sure/Don't know* with items that include “Did you live with anyone who was depressed, mentally ill or suicidal?” and “Were your parents separated or divorced?” (2) Household domestic violence, physical, emotional, and sexual abuse, which used a 5-point scale ranging from 1= *Never* (I refuse to answer) to 5 = *Always* (Many times), with items that include “How often did your parents or adults in your home ever slap, hit, kick, punch, or beat each other up?” and “ How often did a parent or adult in your home ever swear at you, insult you, or put you down?” Each item was recoded to represent if participants experienced the trauma (1) or did not experience the trauma (0), yielding a single index of ACEs (range: 0 – 8) for each participant. On average participants had 4.30 (SD = 2.03) traumatic experiences during childhood.

Combat related trauma experiences were measured using 4-items. Items in this scale include “Did you ever serve in a combat or war zone,” “During your military service, were you ever exposed to dead, dying, or wounded people,” “During your military service, did you ever have to fire your weapon at another person,” and “During your military service, were you ever exposed to environmental hazards such as Agent Orange, chemical warfare agents, ionizing radiation, or other potentially toxic substances?” If participants indicated that they experienced any of these conditions, an indication of combat-related traumatic experiences (1) was given. If no experiences (0) was given. Overall, 62.8% of participants experienced some type of combat-related traumatic event.

The PTSD Checklist Short Form is used to measure responses to stressful events (Bliese et al., 2008) A 5-point scale ranging from 1= *Not at all* to 5= *Extremely* is used to measure responses. Items of the scale include, “Repeated, disturbing memories, thoughts, or images of a stressful experience from the past” and “Feeling distant or cut off from other people” (M = 3.45; SD = 0.94; $\alpha = .87$)

Data Analysis

The data were analyzed using SPSS version 28.0.1.0. Descriptive statistics and frequencies were examined, and a series of bivariate correlations were run to understand the nature of the relationships between variables of interest. Then a series of independent samples t-tests were conducted to examine differences on all variables of interest relative to the presence, or lack thereof, of infidelity as an attributable cause of divorce. A t-value above 2 or less than -2 indicates that the two samples being compared show significant differences (Hayes, 2021), with coefficients that exceed these thresholds indicating significant variation across groups. This study is exploratory in nature and meant to uncover potential trends that could inform additional work in the future.

Chapter 3 - Results

Bivariate correlations were run between variables of interest (see Table 2). Results indicated that the presence of infidelity is negatively and significantly associated with all other variables of interest, with the exception of social support. Infidelity was negatively correlated with depressive symptomology ($r = -.47, p < .001$), anxiety ($r = -.46, p < .001$), and self-efficacy ($r = .55, p < .001$) which measured the emotional readiness variable. Infidelity was also negatively correlated with physical functioning ($r = -.47, p < .001$), which measured the physical readiness variable. Last, infidelity was negatively correlated with spirituality ($r = -.33, p = .002$),

which measured the spiritual readiness variable. Infidelity was not significantly correlated with the social support variable ($r = -.03, p = .81$). It is also worth noting that childhood trauma was positively correlated with social support ($r = .33, p = .001$), anxiety ($r = .60, p < .001$), depressive symptomology ($r = .55, p < .001$), physical functioning ($r = .54, p < .001$), and spirituality ($r = .43, p < .001$). Childhood trauma was negatively correlated with self-efficacy ($r = -.48, p < .001$). In addition, combat-related trauma was positively associated with social support ($r = .27, p = .02$), anxiety ($r = .33, p = .004$), depressive symptomology ($r = .32, p = .005$), physical functioning ($r = .34, p = .005$), and spirituality ($r = .30, p = .011$). Combat-related trauma was negatively associated with self-efficacy ($r = -.23, p = .048$).

Table 2. Correlations between variables of interest

	1	2	3	4	5	6	7	8	9	10
1. Infidelity ^a	--									
2. ACEs	-.50***	--								
3. CRTes	-.35**	.45**	--							
4. PTS	-.53***	.69***	.43***	--						
5. Social Support	-.03	.33*	.27	.46***	--					
6. Anxiety	-.46**	.60***	.33*	.84***	.40***	--				
7. Dep. Sympt.	-.47**	.55**	.32**	.75***	.25*	.73***	--			
8. Self-Efficacy	.55**	-.48***	-.23*	-.70***	-.17	-.66***	-.60***	--		
9. Physical Funct.	-.47**	.54***	.37**	.86***	.37***	.80***	.62***	-.67***	--	
10. Spirituality	-.33**	.43***	.30	.58***	.54***	.45***	.27**	-.42***	.55***	--

Note: ACEs = Adverse Childhood Experiences; CRTes = Combat-Related Traumatic Experiences. PTS = Post-traumatic stress. a = Infidelity is a cause of divorce is coded as 1, infidelity is not a cause of divorce is coded as 0. * $p < .05$. ** $p < .01$. *** $p < .001$.

Examination of independent t-test samples revealed significant variation across groups. When comparing groups on readiness indicators the non-infidelity group showed higher levels of anxiety (infidelity M = 1.99; non-infidelity M = 2.86; $t = 3.74; p = .002$), depressive symptomology (infidelity M = 21.80; non-infidelity M = 26.80; $t = 3.95; p = .001$), physical functioning (infidelity M = 1.63; non-infidelity M = 2.20; $t = 3.80; p = .002$) and spirituality

(infidelity M = 3.00, non-infidelity M = 3.75, $t = 2.21$, $p = .043$). The infidelity group showed higher rates of self-efficacy (infidelity M = 3.61; non-infidelity M = 2.85; $t = -3.62$; $p = .003$).

When levels of post-traumatic stress were looked at across the sample there was a significant difference between individuals who had experienced infidelity and those who had not (infidelity M = 2.32; non-infidelity M = 3.67; $t = 4.05$; $p < .001$). There were also significant differences between the sub samples when infidelity was compared to childhood trauma (infidelity M = 2.22; non-infidelity M = 4.79; $t = 5.18$; $p < .001$). Additionally, results indicated that the non-infidelity group showed higher rates of combat related trauma as well when compared to the infidelity group (infidelity M = .40; non-infidelity M = .83; $t = 2.50$; $p = 0.30$).

Table 3. Independent samples t tests testing differences across infidelity groups.

Indicators	Non-Infidelity	Infidelity	<i>t</i> value
	M (SD)	M (SD)	
Total ACES	4.78 (1.73)	2.22 (1.92)	5.18**
Presence of CRTE	.82 (0.57)	.40 (0.51)	2.50*
Post-Traumatic Stress	3.67 (0.68)	2.32 (1.25)	4.04***
Anxiety	2.85 (0.57)	1.98 (0.86)	3.74*
Depressive Symptoms	26.80 (3.30)	21.80 (4.67)	3.95***
Self-Efficacy	2.85 (0.33)	3.61 (0.77)	-3.62**
Physical Funct.	2.20 (0.36)	1.63 (0.53)	3.80**
Spirituality	3.75 (0.67)	3.00 (1.23)	2.21**

*Note: CRTE = Combat-Related Traumatic Experiences. * $p < .05$. ** $p < .01$. *** $p < .001$.*

Chapter 4 - Discussion

In this study, infidelity was conceptualized as an eventful experience, acting as a stressor that was hypothesized to have a profound impact on others. The findings of RQ1 found that infidelity does contribute to post-traumatic stress among service members, but not at the rates that were hypothesized. Differences were found across all indicators of readiness between the two groups, although the direction of association was inversed. The non-infidelity group showed higher levels of anxiety, depressive symptomology, and physical functioning, contrary to

expectations. When considering differences in levels of stressors the outcome remained the same. The non-infidelity group showed higher levels of PTSD symptomology, ACEs, and combat-related trauma. While the infidelity group also showed to have the same stressors, this is an important note for researchers. Whether infidelity is present or not, service members are still experiencing alterations to their readiness and have additional stressors present. There is a possibility that the time since divorce may have been recent enough for the participants to still be dealing with transitions and adjustments as a result of divorce. Additionally, depending on what lead to the divorce, participants may have still been experiencing emotional changes, depressive symptomology if any, and stressors due to role changes. Amato and colleagues (2012) mention that post-divorce couples may experience high conflict and lack of communication. Additionally, Kitson and Morgan (1990) mention that after divorce the individuals will experience disrupted social supports, economic adjustments, disruption in their life cycle, and legal issues if children are involved. Knowing that there are many possible stressors post-divorce, service members may have endured them when participating in this study.

It is important to note that past research has focused mainly on combat deployments being a stressor and causing PTSD-like symptomology in this population (Balderrama-Durbin et al., 2017; Kachadourian et al., 2015). However, prior research has been sparse in exploring the potential link between infidelity and post-traumatic stress. Notable exceptions include the study conducted by Monk and colleagues (2019) where it was found that relationship distress contributed to psychological distress in service members and Balderrama-Durbin and colleagues' (2017) study where rates of infidelity were looked at during a year-long deployment. While this study sought to further explore the role of infidelity in post-traumatic stress and personal readiness, it was exploratory in nature and meant to identify potential mechanisms that could

drive future research. Although findings were contrary to expectations, and inconsistent with prior literature, as described above, this study still aligns with previous findings on infidelity. Based on the findings, infidelity can be considered a stressor, and can be seen to cause the same secondary stressors as PTSD and combat-related trauma. Although infidelity is not a part of the DSM, the results show that the presence of it does alter personal readiness in the same way as ACEs, combat-trauma, and PTSD which are all included in the DSM. Knowing this supports Roos and colleagues' (2019) study that looks at infidelity as a stressor. As in the study, when infidelity was present, PTSD symptomology and negative psychological outcomes (i.e., depression symptoms and anxiety) were present and this study has similar findings.

As previously stated, the presence of post-traumatic stress was measured within the groups and was found. While it can be assumed that infidelity was the primary stressor for the infidelity group, the findings raise questions about the non-infidelity group and what the primary source of their post-traumatic stress levels are. It can be assumed that combat-related trauma and ACEs are the primary source of stress levels in the non-infidelity group, but it would be interesting to know if that sample experienced any infidelity and if so, did it cause any additional stressors. That may be a direction for future researchers to explore.

While causality cannot be established, one possibility can be found in looking at the rates of ACEs and combat-related trauma in this sample. The non-infidelity sample experienced significantly higher levels of prior trauma, outside of the experience of infidelity. Prior traumas, including both childhood trauma and combat-related trauma were linked with higher levels of stress, and additional psychological outcomes (i.e., depression symptoms and anxiety). This is important to note being that other researchers have found similar psychological outcomes in this population due to other experiences. It may be advisable that the military conduct a study and

grasp a better understanding of the specifics of what prior traumas have been experienced and to what extent. Knowing which ACEs and what kind of combat-trauma was experienced could provide insight to information that may be overlooked in these populations. Additionally, knowing the specifics would serve as a better guide to provide support to help mitigate the negative outcomes of prior traumas.

Limitations & Future Directions

There are a number of limitations that should be noted and considered when interpreting findings. The first limitation was the sample size, future researchers may want to look at including more service members in their study. The second limitation was the subsample size of service members who had identified infidelity as an attributable cause for divorce. It may be worthy of looking at a sample of service members that experienced infidelity and comparing findings within that population. Future researchers may also want to consider concentrated sampling procedures at a single duty location in comparison to another duty station being that tempo, deployments, and deployment locations all differ. At one duty station deployments may not occur being that it is Training and Doctrine Command (TRADOC) or inactive, but at some duty stations, deployments occur more rapidly. The lack of resources for service members who go overseas or are assigned to a location where family is not allowed is an extremely important piece to consider. This sheds light on the differences that may arise from concentrating on different duty stations as compared to just focusing on one. Service members in TRADOC typically have a different experience being that is considered to be a more relaxed setting within the military. A service member in an up-tempo setting compared to one in a more relaxed setting experiencing infidelity could have two different outcomes just based on the duty location.

Additionally, looking at different duty stations would allow researchers to expand their findings and make it applicable to a wider range of service members.

It was not known whether or not participants committed infidelity or had infidelity committed against them. Knowing this may have further explained symptomology within the sample being that outcomes could have been different depending on if the participant was the offended or offender. Ortman (2005) mentions that the partner who has infidelity committed against them may have symptomology that parallels with PTSD-like symptomology. Kachadourian and colleagues (2015) found that service members who had infidelity committed against them during a deployment experienced post-traumatic stress and depressive symptomology. While there is some research demonstrating the impact of having a partner commit infidelity and the well-being of the individual, there is less know about the experiences of those that were unfaithful. It may be important to know what led to this event and why infidelity was committed. Additionally, not knowing exactly when the participant's divorce occurred or what their feelings were about the divorce may have provided further explanation of the results. The unknown of these two important concepts are a limitation of this study with knowing that infidelity and divorce can cause negative outcomes.

Resilience and coping styles should be taken into consideration for future studies. Being that the military has resiliency programs, chaplains, and behavior health professionals that are accessible to service members (Army Resilience Doctrine, 2015), there is a chance that the infidelity group had lower rates of anxiety and stress due to utilizing their resources. The resiliency programs in the military are at most duty stations and have trained professionals to help with coping styles in order to navigate difficult experiences. Knowing this, it may be worthy to consider that these programs may have a role in the results. Additionally, the same concept

applies to chaplains in the military. Chaplains are assigned to every unit and are available and accessible to service members at any point in time (Army Resilience Doctrine, 2021). Behavior health is described as behavior healthcare provided to service members to enhance their mental, physical, and spiritual well-being (Army Resilience Doctrine, 2015). While these programs are readily available, there may be a disconnect on service members who utilize the program and those who do not. Another aspect to consider in regard to resiliency and coping is infidelity being a coping mechanism.

Theoretically, it is posited that when individuals experience stress, coping is a way to mitigate that stress. Pearlin and Bierman (2013) mention that an individual may cope in a way that can affect others that they are associated with (i.e., spouse) if they are experiencing stressors. For example, if a person is stressed by work, their marriage, or family in general, there is a possibility that the individual can confide in someone else other than their spouse or commit an act of infidelity to cope with the stressors in their life but do not take the effects of their actions into consideration. Additionally, Pearlin (1991) states that coping is an individual action and individuals cope with what eases their distress and with whatever is readily available. Being that service members have constant relocations, extensive training, and deployments, this can cause them to be away from their partner and make it a possibility to turn to infidelity, as an unhealthy coping mechanism, to deal with such strains. This possibility should be further explored by researchers and considered by practitioners.

Researchers looking to collect primary data in this area may consider asking questions in regard to service members resources. Pearlin (1981) expresses the importance of resources in regard to stress being that it can change outcomes. In this study, it was hypothesized that service members who had experienced infidelity would have higher levels of affected readiness in the

measured domains. Knowing what kind of resources service members may have used could have provided additional insight on the findings of this study. While we considered the interconnection of family preparedness and social supports as a single broader construct, there could be some nuance lost by not further differentiating these constructs. Although there may be similarities in the experience of global social support and family resources, some research indicates that service members who have social supports that they can relate to decrease the risk of PTSD symptomology (Han et al., 2014; King et al., 2006). In other words, service members felt more comfortable confiding to peers who had similar experiences. This is important to note being that it could highlight a disconnect between service members and their family members who may not understand their experiences. Furthermore, family preparedness may be considered a secondary stressor to service members considering the extensive time that they may spend away, reconciliation when returning home, and a lack of communication and connection. Reconciliation may be a critical consideration for this population being that they are physically away and may have to deal with ample readjustments upon their return. Readjustments could also be considered an additional stressor that may occur within family preparedness rather than with peer social supports.

Future researchers could be aided by utilizing a qualitative approach to better understand infidelity and personal readiness within service members. Interviews may provide a setting that allows for researchers to better understand the experiences that are being talked about. Interviews also allow researchers to ask follow-up questions, ask for more in depth details, and also allows for body language and other non-verbal communication to be annotated. An example of this may be if the researcher asks a question and the participant sighs, cries, or puts their head down, those actions are all worth noting. In person interviews also allows for broad answers to be expanded

on and talked about in more depth. Additionally, researchers could record the interviews to allow for them to be relistened to and to be able to interpret the answers in an accurate way.

There are many factors that can be overlooked while studying infidelity in this population. A qualitative approach allows for researchers to not only guide the conversation to receive insightful information, but it also gives the participant a chance to describe their experiences in a way that cannot be obtained in quantitative research. This approach would also give researchers a chance to provide information on a service member's lived experience once experiencing infidelity, which is an approach that has not been taken. Understanding the lived experiences will not only show the commonalities of the shared experience across this population, but it will also provide the military with in-depth descriptions of reactions and feelings that should be taken into consideration when searching for solutions to help this population.

Being that the military is a male predominant profession, the sample included more males than females. This is something to take into consideration being that females have been found to engage in infidelity at higher rates than men (Vangelisti & Gerstenberger, 2004). The demographics of this study can be considered a limitation and future research should consider conducting a study with a more balanced sample of males and females to provide a more nuanced and helpful understanding of the phenomenon with different population segments. Additionally, rank is another important aspect of the military. McGraw and colleagues found that service members junior enlisted rank was associated with anxiety, stress, and depression symptoms due to lack of job control in the workplace and job demand within the military. Future researchers should consider rank and a service member's job when considering studying this population because junior enlisted, non-commissioned officers, and commissioned officers all

have different roles. Unfortunately, in this study there was not a large enough sample to look at between group differences on the basis of rank or other key demographic factors.

Implications

The findings of this study will be important for military leaders, chaplains, and other researchers interested in how to better serve this population. It provided insight on how service members who had not experienced infidelity were experiencing anxiety and depressive symptomology at higher levels than service members who did experience infidelity. Additionally, participants who had experienced ACEs and combat-related trauma also showed higher rates of anxiety and depressive symptomology. These findings are useful in further reinforcing our understanding of the connections that exist between these constructs. There have been consistent links between ACEs and CRTes with anxiety and depression symptoms across previous studies (Morgan et al., 2021) and it seems as though even in this sample, the association between prior trauma is being felt by military families in later adulthood. While this exploratory study addressed questions that have not been asked before, it found the similar findings that have been linked with this population for years.

Post-traumatic stress is extremely prevalent in the military as shown in the literature (Ruglass & Kendall-Tackett, 2015; Morgan et al., 2021). The findings within this study supported previous findings that shed light on post-traumatic stress in this population. In order to better understand why post-traumatic stress levels are so prevalent in service members may be a study that should be conducted. For example, if infidelity is considered a primary stressor, understanding what may have led up to that event would be vital information. If infidelity occurs as a result of a deployment, this may push the military to consider better ways to keep service members connected to their spouses in order to mitigate the issues that arising during the

deployment. The findings of this study only allow researchers to speculate where primary stress is arising from. While the Stress Process used in this study would also take into consideration that stress can arise from unexpected events (i.e., the infidelity being completely unexpected), this may be a critical piece in furthering our understanding of post-traumatic stress levels in this population (Pearlin et al., 1981). Unexpected events versus expected events may cause various outcomes in regard to stress levels. Additional questions in regard to primary stress could be a direction for future researchers.

While all domains of readiness are extremely important, social supports and family preparedness may be the domain that has the greatest influence on service members psychological well-being and readiness as a whole. Being that post-traumatic stress levels, combat-related trauma, and ACEs were present in both groups, there is a possibility that service members lack the support that is needed to enhance their domains of readiness. Considering that this was a divorce sample, there is a possibility that social support was lost in the divorce. Ortman (2005) mentions that avoidance is a part of PTSD and that partners may avoid friends and places that remind them of their spouse. This could be one consideration in understanding stress levels and depressive symptomology in the infidelity group. Being that avoidance is also mentioned in DSM-5 as a result of a traumatic event, the non-infidelity group may lack social supports as well. This consideration may be worth looking into and could potentially be an explanation for the presence of stress levels, anxiety, and depressive symptomology in this sample.

Additional considerations to the findings of this study are the rank of the service members. Majority of the sample were junior enlisted. McGraw and colleagues (2012) found in their study that the physical and psychological well-being of commissioned officers far exceed

junior-enlisted soldiers in their study. To further this consideration, McGraw and his colleagues emphasized that junior-enlisted soldiers had high demand jobs and low job control, and these were all associated with stress, depression symptoms, and anxiety. This knowledge may allow us to better understand why stress levels were present in this population. There is a possibility that the non-infidelity group had high demand jobs within the military.

Conclusion

This study was able to find significant differences between service members who had indicated infidelity as a cause of divorce and service members who had not. While the findings were not what was hypothesized, this study shows that whether infidelity has occurred or not stress levels, anxiety, and depressive symptomology are still present in service members. ACEs, combat trauma, and post-traumatic stress were also present in this sample which supports previous literature on this population. While there were a few limitations in this study to include the sample size and majority being males, there are still noteworthy findings that will allow military leaders, chaplains, and future researchers to better understand the experience of infidelity in military families. Additionally, this study may be a step in the right direction for military leaders to recreate programs that are not working for service members or bring awareness to underutilized programs that may help decrease post-traumatic stress levels, anxiety, and depressive symptomology.

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Appendix A – Institutional Review Board Approval

TO: Dr. Anthony Ferraro
Applied Human Sciences
Justin Hall

FROM: Rick Scheidt, Chair 
Committee on Research Involving Human Subjects

DATE: 02/24/2022

RE: Proposal #9651.1, entitled “Co-Parenting Across Households: Secondary Data Analysis.”

A MINOR MODIFICATION OF PREVIOUSLY APPROVED PROPOSAL #9651,
ENTITLED, “Co-Parenting Across Households: Secondary Data Analysis”

The Committee on Research Involving Human Subjects at Kansas State University has approved the proposal identified above as a minor modification of a previously approved proposal, and has determined that it is exempt from further review. This exemption applies only to the most recent proposal currently on file with the IRB. Any additional changes affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption.

Unanticipated adverse events or problems involving risk to subjects or to others must be reported immediately to the IRB Chair, and / or the URCO.

It is important that your human subjects project is consistent with submissions to funding/contract entities. It is your responsibility to initiate notification procedures to any funding/contract entity of changes in your project that affects the use of human subjects.

Appendix B – Instruments

Adverse Child Experiences Scale (ACES)

Original Reference:

World Health Organization (2011). *Adverse childhood experiences international questionnaire (ACE-IQ): Pilot study review and finalization meeting report*. Geneva, CH: World Health Organization.

Reference for Short Form:

Ford, C. D., Merrick T., M., Parks, E. S., Breiding, J. M., Gilbert K. L., Edwards, J. V., Dhingra S. S. & Barile, P., J. (2014). Examination of the factorial structure of adverse childhood experiences and recommendations for three subscales scores. *Psychology of Violence*, 4(4), 432-444.

BRFSS. (2009). Behavioral risk factor surveillance system questionnaire.

Scale & Items/Instructions:

3-point scale:

1. Yes
2. No
3. Not sure/Don't know

Subscales Items:

When you were growing up, during the first 18 years of your life...

1. Did you live with a household member who was a problem drinker or alcoholic?
2. Did you live with anyone who used illegal street drugs or who abused prescription drugs?
3. Did you live with anyone who was depressed, mentally ill, or suicidal?
4. Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?
5. Were your parents ever separated or divorced?

5-point scale:

1. Never (I refuse to answer)
2. Rarely (Never)
3. Sometimes (Once)
4. Most of the time (A few times)
5. Always (Many times)

Subscales Items:

When you were growing up, during the first 18 years of your life...

6. How often did your parents or adults in your home ever slap, hit, kick, punch, or beat each other up?
7. How often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? Do not include spanking.
8. How often did a parent or adult in your home ever swear at you, insult you, or put you down?
9. How often did anyone at least 5 years older than you or an adult, ever touch you sexually?
10. How often did anyone at least 5 years older than you or an adult, try to make you touch them sexually?
11. How often did anyone at least 5 years older than you or an adult, force you to have sex?

Beck Anxiety Inventory

Original Reference:

Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology*, 6, 893-897.

Reference for Subscales (College Students):

Osman, A., Kopper, B. A., Barrios, F. X., Osman, J. R., & Wade, T. (1997). The Beck Anxiety Inventory: Reexamination of factor structure and psychometric properties. *Journal of Clinical Psychology*, 53 (1), 7-14.

Scale:

4 pt. Scale

0. Not at all
1. Mildly but it didn't bother me much
2. Moderately- it wasn't pleasant at times
3. Severely- it bothered me a lot

Instructions: Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by circling the number in the corresponding space in the column next to each symptom.

Subscales Items:

1. Unable to relax
2. Fear of worst happening
3. Terrified or afraid
4. Nervous
5. Fear of losing control
6. Scared
7. Feeling hot
8. Indigestion
9. Face flushed
10. Hot/cold sweats

CES-D (Center for Epidemiologic Studies Depression Scale)

Original Reference:

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.

Short Form Reference:

Cole, J. C., Rabin, A. S., Smith, T. L., & Kaufman, A. S. (2004). Development and validation of a rasch-derived CES-D short form. *Psychological Assessment, 16*(4), 360-372.

Scale:

4pt. Scale

0. Rarely or None of the Time (Less than 1 Day)
1. Some or a Little of the Time (1-2 Days)
2. Occasionally or a Moderate Amount of Time (3-4 Days)
3. Most or All of the Time (5-7 Days)

Instructions: Could not find, but article mentioned asking over last two weeks, instead of just 1.

1. I felt that I could not shake off the blues even with help from my family or friends.
2. I felt lonely.
3. I was bothered by things that don't usually bother me.
4. I had trouble keeping my mind on what I was doing.
5. I felt like everything I did was an effort.
6. I felt fearful.
7. People were unfriendly.

SF Mental Health Survey

Original Reference:

Ware, E., J., & Gandek, B. (1994). The sf-36 health survey: Development and use in mental health research and the iqola project. *International Journal of Mental Health, 23*(2). 49-73.

Reference for Subscales:

Ware, E., J., & Gandek, B. (1994). The sf-36 health survey: Development and use in mental health research and the iqola project. *International Journal of Mental Health, 23*(2). 49-73.

Instructions: The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

Scale:

1. No, not limited at all
2. Yes, a little
3. Yes, limited a lot

Items:

Physical Functioning (PF)

1. Vigorous activities, such as running, lifting heavy objects, strenuous sports
2. Moderate activities, such as moving a table, vacuuming, bowling*
3. Lifting or carrying groceries
4. Climbing several flights of stairs
5. Climbing one flight of stairs*
6. Bending, kneeling, or stooping
7. Walking more than a mile
8. Walking several blocks
9. Bathing or dressing

Instructions: During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Scale:

1. Not at all
2. A little bit
3. Moderately
4. Quite a bit
5. Extremely

Items: Subscale (BP)

1. Intensity of bodily pain
2. Extent pain interfered with normal work

PTSD Checklist Short Form

Original Reference:

Weathers, D. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993, October). The PTSD checklist (PCL): Reliability, validity, and diagnostic utility. *Paper presented at the 9th annual meeting of the international Society for Traumatic stress Studies*, San Antonio, TX.

Reference for Short Form:

Validating the primary care posttraumatic stress disorder screen and the posttraumatic stress disorder checklist with soldiers returning from combat. *Journal of Consulting and Clinical Psychology*, 76(2), 272-281. doi: 10.1037/0022-006X.76.2.272

Scale:

5-point scale

1. Not at all
2. A little bit
3. Moderately
4. Quite a bit
5. Extremely

Instructions: Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully and indicate how much you have been bothered by that problem in the last month.

Items:

1. Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?
2. Feeling very upset when something reminded you of a stressful experience from the past?
3. Avoid activities or situations because they remind you of a stressful experience from the past?
4. Feeling distant or cut off from other people?
5. Feeling irritable or having angry outbursts?
6. Having difficulty concentrating?

Combat-Related Trauma Experiences

1. Did you ever serve in a combat or war zone?
 Yes No
2. During your military service, were you ever exposed to dead, dying, or wounded people?
 Yes No
3. During your military service, did you ever have to fire your weapon at another person?
 Yes No
4. During your military service, were you ever exposed to environmental hazards such as Agent Orange, chemical warfare agents, ionizing radiation, or other potentially toxic substances?
 Definitely no Probably no Probably yes Definitely yes Don't know

GSES-12 (The General Self-Efficacy Scale)

Original Reference:

Sherer, M., Maddux, J. E., Mercandante, B., Prentice-Dunn, S., Jacobs, B. (1982). The Self-efficacy Scale: Construction and validation. *Psychological Reports*, 51, 663-671.

Reference for scale:

Bosscher, R. J., & Smit, J. H. (1998). Confirmatory factor analysis of the General Self-Efficacy Scale. *Behaviour Research and Therapy*, 36, 339-343.

Scale:

5 pt. Likert

1. Strongly agree
2. Disagree
3. No Disagreement/Agreement
4. Agree
5. Strongly Agree

Items:

1. If something looks too complicated, I will not even bother to try it.
2. I avoid trying to learn new things when they look too difficult.
3. When trying to learn something new, I soon give up if I am not initially successful.
4. When I make plans, I am certain I can make them work.
5. If I can't do a job the first time, I keep trying until I can.
6. When I have something unpleasant to do, I stick to it until I finish it.
7. When I decide to do something, I go right to work on it.
8. Failure just makes me try harder.
9. When I set important goals for myself, I rarely achieve them.
10. I do not seem capable of dealing with most problems that come up in my life.
11. When unexpected problems occurs, I don't handle them very well.
12. I feel insecure about my ability to do things.

Basic Psychological Needs Satisfaction and Frustration Scale (BPNSF)

Original Reference:

Chen, B., Vansteenkiste, M., Beyers, W., Boone, L., Deci, E. L., Duriez, B.,... Verstuyf, J. (2015). Basic psychological need satisfaction, need frustration, and need strength across four cultures. *Motivation and Emotion*, 39, 216-236.

Scale:

1. Not at all true
- 2.
- 3.
4. Completely true

Instructions:

Below, we ask you about the kind of experiences you actually have in your life. Please read each of the following items carefully. You can choose from 1 to 5 to indicate the degree to which the statement is true for you at this point in your life.

Items:

1. I feel that the people I care about also care about me.
2. I feel connected with people who care for me, and for whom I care.
3. I feel close and connected with other people who are important to me.
4. I experience a warm feeling with the people I spend time with.

Faith Activities In The Home Scale (FAITHS)

Original Reference:

Lambert, N. M. & Dollahite, D. C. (2010). Development of the Faiths Activities in the Home Scale (FAITHS). *Journal of Family Issues*, 31, 1442-1464.

Scale:

Frequency Scale:

0 = *never or not applicable*

1 = *rarely*

2 = *sometimes*

3 = *often*

4 = *always*

Instructions: For each item below, please indicate (1) the FREQUENCY you and your child are involved in these various activities and (2) how important that item is to you and your child's religious life.

Items:

1. Family prayer (family together other than at meals)
2. Family reading of scripture or other religious texts
3. Family singing or playing religious music/instruments
4. Family religious gathering/activities/celebrations
5. Family use of religious media (e.g., videos, radio, TV)
6. Family religious conversations at home
7. Saying/singing a blessing/grace/prayer at family meals
8. Parents praying with child or listening to his/her prayers