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The Relationship Between Posttraumatic Growth, Social Support, and Rurality

Chelsea Thweatt

THE RELATIONSHIP BETWEEN POSTTRAUMATIC GROWTH, SOCIAL SUPPORT, AND RURALITY

by

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(Under the Direction of Brandon Weiss)

ABSTRACT

The majority of Americans will experience a trauma in their lifetime (Kilpatrick et al., 2013). While some will experience severe negative symptoms as a result of their trauma (U.S. Department of Veteran's Affairs, 2019), up to 70% of people will report positive outcomes (Calhoun & Tedeschi, 1999). Posttraumatic growth (PTG) refers to positive changes that individuals experience after a traumatic event (Tedeschi & Calhoun, 2004). A key way for PTG to occur is through social support (Shakespeare-Finch & Copping, 2006). Research found that the quality and the quantity of social support matter when predicting PTG (Shang et al., 2020). Specifically, Shang and colleagues (2020) reported that people who had high quality, high quantity social support experienced high levels of PTG and people who had high quality, low quantity social support experienced low levels of PTG. People who live in rural areas often seek help coping with mental health problems but receive rejection and lack of acceptance (Robinson et al., 2012). Therefore, they may be especially subject to experiencing low quality, high quantity social support in the aftermath of a trauma. This study examined Posttraumatic Stress Disorder severity, PTG, quality of social support, quantity of social support, and online social support. Results found statistically significant relationships between most of the variables. There was a conditional effect of the interaction between quality and quantity of social support on PTG. There was a statistically significant interaction between quantity of social support and online social support on PTG. Implications for these findings are discussed.

INDEX WORDS: Posttraumatic growth, Trauma, Stress, Social support, Rurality, Quality, Quantity

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by

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CHAPTER 1

LITERATURE REVIEW

The U.S. Department of Veterans Affairs (2019) defines trauma as a shocking or dangerous event that either happens to an individual or that an individual sees, in which that individual believes their life or other people's lives are in danger. At some point in their lifetime, the majority of people will experience the occurrence of at least one traumatic event. Different people are likely to experience different types of traumas, depending on their demographic factors. For example, women are more likely than men to experience traumas such as sexual assault and child sexual abuse, whereas men are more likely than women to experience traumas such as physical assault, combat traumas, or witnessing deaths or major injuries of others (U.S. Department of Veterans Affairs, 2019). While people can experience a variety of outcomes as a result of a trauma, Posttraumatic Stress Disorder (PTSD) is one outcome that people frequently think of when considering the possible outcomes of a traumatic event. In this study, we will take a look at several factors related to trauma: PTSD, posttraumatic growth (PTG), and social support. Specifically, we will be examining the relationship between the quality and the quantity of social support and how those relate to PTG in people who live in rural areas.

Posttraumatic Stress Disorder (PTSD)

PTSD is a psychological that sometimes occurs after an individual has been exposed to a traumatic event, either directly or indirectly (APA, 2013). According to DSM-5, PTSD symptoms last for at least one month and include a variety of negative physiological, cognitive, and emotional reactions as a result of the traumatic event. For example, someone with PTSD will experience one or more of the following: unwanted or upsetting memories, nightmares, flashbacks to the traumatic event, negative affect, feelings of isolation, overly negative thoughts, trouble concentrating, trouble sleeping, and irritability.

While the majority of American adults (89.7%) will experience a trauma at some point in their lifetime (Kilpatrick et al., 2013), only about seven to eight percent of the U.S. population will experience PTSD throughout their lifetime (U.S. Department of Veterans Affairs, 2019). Specifically, about ten percent of U.S. women and about four percent of U.S. men will experience PTSD at some point in their lifetime. The type of trauma experienced seems to play an influence of whether or not PTSD will develop, PTSD prevalence rates were higher among people who experienced traumas such as combat and interpersonal violence compared to other types of traumatic events (Kilpatrick et al., 2013).

However, not all people who experience a traumatic event go on to later develop PTSD (Yehuda, 1999; U.S. Department of Veterans Affairs, 2019). In fact, the experience of a traumatic event is not even the most important predictor of whether or not someone will go on to develop PTSD (Yehuda, 1999). Rather, the cumulative stress that someone has experienced, and their prior history of trauma exposure were the strongest predictors. According to Yehuda (1999), the DSM-IV implied that humans have diverse responses to the traumatic events they experience, but it did not state reasons for why some people have significant, adverse reactions to traumatic events while other people do not. Harvey and Yehuda (1999) believe that if someone does not experience the feeling of internal loss of control following a traumatic event, then that person might, in fact, experience a variety of positive emotions as a result of the traumatic event. Relatedly, between 40% and 70% of people who have experienced a traumatic event later reported that they felt, in some way, a positive benefit resulting from the trauma (Calhoun & Tedeschi, 1999).

PTSD is one of several outcomes that an individual might experience after the occurrence of a traumatic event and involves a variety of highly negative outcomes. While PTSD is probably the most commonly discussed topic in terms of trauma outcomes, it is just one of many outcomes that people could have after experiencing a traumatic event: There are a variety of outcomes that can potentially occur after a traumatic event, including positive outcomes.

Posttraumatic Growth (PTG)

While PTG is a concept that is relatively new to psychology, the idea has been pondered by people for thousands of years (Tedeschi & Calhoun, 2004). Medical and clinical research has often overlooked the positive outcomes that occur when people experience traumatic events, likely because the majority of people who seek help from a therapist or a medical provider for traumatic events do so because they need help coping with the negative outcomes of these traumatic events. However, there is significant evidence suggesting that people may also experience a variety of positive changes as a result of traumatic life events. Interestingly, it appears that more people report experiencing growth as a result of a negative experience or traumatic event than they report experiencing a psychiatric disorder (Tedeschi & Calhoun, 2004). While people still experience distress as a result of a traumatic event, some type of growth is still very likely to occur as a result of the traumatic event.

PTG is the positive change that an individual experiences as a result of a traumatic event (Tedeschi & Calhoun, 2004). When someone experiences PTG, they have not just lived through a traumatic event and coped with it, but they have also experienced a significant change in development beyond the level they were at before the occurrence of the traumatic event. PTG includes a qualitative change in an individual's functioning, which is what differentiates it from similar concepts such as resilience, optimism, and hardiness (Tedeschi & Calhoun, 1995). These concepts simply allow people to be equipped to handle challenging events, whereas PTG is the transformative outcome of experiencing a traumatic event.

Research suggests that individuals often report experiencing PTG after a wide variety of traumatic events, including but not limited to transportation accidents, natural disasters, interpersonally violent experiences, and deaths of loved ones (Linley & Joseph, 2004). Specifically, PTG includes the positive perceived changes in self, a changed sense of relationship with others, and a changed philosophy of life as a result of experiencing a traumatic event (Tedeschi & Calhoun, 1996). For example, after experiencing a trauma, people may begin to realize the importance of the relationships in their lives, or they may become much more empathetic to others who are experiencing hardships (Tedeschi & Calhoun,

2004). When PTG occurs in someone, they will experience important changes in functioning as a result of the occurrence of a traumatic event involving some qualitative change in the functioning of the individual (Tedeschi & Calhoun, 2004). Few people seem to consciously make an effort to find meaning from a traumatic event, so it is likely that PTG results due to unconscious attempts at psychological survival (Tedeschi & Calhoun, 2004). For instance, after experiencing a trauma, people do not set out to find meaning. Rather, it seems that PTG occurs as unconscious process in an attempt to help people cope with the negative emotions they experience after the trauma occurs.

The relationship between trauma and PTG is highly complex, and knowledge relating to the construct is still emerging (Tedeschi et al., 2007). For example, PTG does not occur after all traumatic or negative experiences and is influenced by a number of factors. In order for someone to experience a significant amount of PTG, they will likely need to experience a major threat or have a fundamental schema "shatter," which will sometimes co-occur with severe psychological distress (Tedeschi & Calhoun, 2004). Additionally, individuals may experience PTG even while still coping with severe stress related to the trauma. In fact, almost all people report at least some levels of psychological distress. Research also suggests that people may begin benefiting from PTG even while a traumatic event is still in the process of occurring (Zeligman, 2020).

Tedeschi and Calhoun (2004) proposed a model for PTG in order to help people better understand the way in which PTG functions. They proposed that PTG was greatly affected by an individual's personal characteristics, how much support they received, how much disclosure they provided, and the cognitive processing that occurred in the cognitive structures that were either threatened or nullified by the traumatic event or events that occurred. They believed that the ways in which cognitive processing occurred was one of the most central aspects in determining the degree to which PTG might develop. Additionally, Tedeschi and Calhoun (2004) proposed that PTG interacted with an individual's wisdom about life and helped develop their life narrative. They viewed PTG as part of an ongoing and continuous process, rather than occurring as a one-time, static outcome.

When someone experiences a traumatic event, many will report feeling that they are stronger because of it (Thomas et al., 1991). Because they feel stronger as a result of one trauma, this may then in turn lead to individuals developing a confidence which they may carry with them when dealing with other potentially traumatic events in the future. When people are able to find meaning after the occurrence of a trauma, they may then feel emotional relief which in turn may lead to a new, more positive philosophy of life, thus changing their beliefs about their lives and its meaning (Janoff-Bulman, 1992; Taylor & Brown, 1988).

Additionally, after the experience of a traumatic event, people sometimes become more emotionally expressive and more willing to accept help, which can alter their relationships with others and therefore allow them to gain more social support than they previously had (Tedeschi & Calhoun, 1996). Overall, PTG refers to the positive outcomes that people experience after the occurrence of a traumatic event. While there are a variety of factors that influence the likelihood of whether or not someone will experience PTG, the relationships that people have with other individuals in their lives are thought to be one highly influential factor in determining whether or not someone will go on to experience PTG in the aftermath of a traumatic event.

PTG and Social Support

Social support is one of the key ways through which PTG can occur (Shakespeare-Finch & Copping, 2006). When developing the model through which PTG is thought to occur, Tedeschi and Calhoun (2004) included social support as an essential aspect of the model. People seem to be able to cognitively process trauma better if they are able to self-disclose in a supportive social environment; thus, allowing social support to facilitate the occurrence of PTG. Additionally, social support seems to help foster PTG due to personal interactions helping to develop new schemas and by experiencing empathy from other people.

Social support has been shown to increase the overall health and well-being that people experience (Berkman et al., 2000; Cohen, 2004). Additionally, social support has been shown to protect against having psychological distress (Caxaj, 2016; Compton et al., 2005; Turvey et al., 2002). Tedeschi

and Calhoun (2004) reported that social support seemed to be most effective in aiding in PTG when social support was stable and consistent throughout periods of time. In a study examining the effects of a drought on college students in Botswana, Zeligman and colleagues (2020) found that while social support did not buffer the effects of trauma on PTG, social support was the strongest predictor of PTG.

According to Kaniasty and Norris (2009), there are three different facets that contribute to the social support one experiences: social embeddedness, received support, and perceived support. Social embeddedness is the frequency and types of relationships that individuals have with others, received support is the actual help that individuals get from others, and perceived support is the feeling that the individual would have support available if it were needed. All three of these outcomes have been found to contribute in different ways to various psychological outcomes. However, when studying social support and PTG, most of the research that has been conducted focused on perceived social support (Shang et al., 2020).

According to Shang and colleagues (2020), making distinctions between the quality and quantity of support received is also important. In their study examining the outcomes of a natural disaster, they found that, when examined alone, neither the quality nor the quantity of social support was a statistically significant predictor of PTG. However, there was an interaction between the quantity and the quality of social support when predicting PTG. Specifically, they found that when people received a combination of high quality and high quantity social support, they experienced greater levels of PTG. However, when people experienced higher quantity social support that was low in quality, they experienced lower levels of PTG. They suggested that it is important to ensure that trauma survivors receive not only adequate amounts of social support, but also social supports that meet specific needs and that are provided in skillful and timely manners.

Therefore, when examining people's social support in future studies, it will be important to take into account not only the type and the amount of social support, but also the quality of the social support that individuals are receiving. Examining the effect that different aspects of social support have on

individuals may be especially important in the aftermath of trauma, as this is a time in life where people may be especially vulnerable and in need of help from other people.

Social Support and Rurality

While living in rural areas has advantages, such as intimate sense of communities, relaxed paces of life, and low crime rates (Jameson et al., 2009), there are also disadvantages, such as stigmas against seeking and receiving mental health treatment, less privacy, and less anonymity (Rainer, 2010). People from rural areas are also more likely to distrust outsiders than people from urban areas (Keller & Owens, 2020). Additionally, there are severe mental health care shortages in many rural areas (U.S. Department of Health and Human Services, 2011), which leads many to seek out mental health treatment through their primary care providers, if they seek treatment at all (Chapa, 2004). However, even those individuals in rural areas who do seek out treatment from behavioral health therapists may be at a disadvantage compared to their urban counterparts, as rural practitioners reported that some treatments considered "best practice" were made difficult by the rural environment and often needed to be adapted in order to be appropriate for rural clients (Clark et al., 2012). Due to these reasons, many people in rural areas rely on family members for help with mental illnesses (Kohn-Wood & Wilson, 2005).

However, relying on family members for help with mental health problems does not always work well for people in rural areas. A study done by Robinson and colleagues (2012) found that people with mental health issues in rural areas often report feeling stigmatized because of their problems and often believe that their family members would be unwilling to help them through their problems due to the severe stigma. Additionally, people felt betrayed, ostracized, and rejected by their families because of their mental health problems due to the lack of awareness and acceptance that exists for mental health issues in rural areas. When people did reach out to family members for help with mental health issues, they often received shame and blame, rather than the support they expected and needed. This lack of positive, effective social support decreases the likelihood that people will seek treatment, and thereby likely exacerbates symptoms of various mental health disorders.

Additionally, even if those who live in rural areas were to seek out professional mental health treatment, they may not be able to receive adequate treatment (Trawver et al., 2019). The majority of empirically based treatments were not developed with rural individuals as participants, and very few evidence-based practices have been shown to be empirically effective in treating rural populations (Trawver et al., 2019). Therefore, even when rural individuals seek out professional mental health treatment, it may be difficult for licensed therapists and counselors to effectively treat individuals who live in rural areas.

Living in rural areas has been shown to have both positive outcomes- such as relaxed paces of life (Jameson et al., 2009)- and negative outcomes- such as stigmas against seeking mental health treatment (Rainer, 2010)- for people. Specific to the current study, living in a rural area can pose a major barrier to receiving adequate mental health treatment, leaving people to rely on their families for help with their mental health. Because of this, people who live in rural areas may be especially ill-equipped to cope with traumatic events and possibly experience PTG, unless they have family or friends who are able to offer high levels of high quality social support.

Rurality and Trauma

Despite rural primary care providers' expectations that people who live in rural areas would have lower rates of trauma exposures, rural individuals display similar rates of trauma as their urban counterparts (McCall-Hosenfeld et al., 2014). In fact, the only type of trauma rural individuals were significantly less likely to report than urban individuals was war-related trauma. Additionally, rates of a PTSD diagnosis throughout the lifetime were similar for those living in rural and urban areas. McCall Hosenfeld and colleagues (2014) suggested that the combination of similar rates of trauma occurring in rural individuals yet decreased access to mental health treatment leads to the potential for rural individuals not being able to receive the necessary treatment and help in response to experiencing a traumatic event.

In a study done by Keller and Owens (2020), college students from rural areas reported significantly higher PTSD severity than college students from urban areas. However, the same study

found no significant differences in number of traumatic events reported between urban and rural participants. Therefore, it seems possible that the lack of resources available, and potentially the lack of adequate social supports available, could have led to rural college students experiencing increased negative outcomes as a result of the traumatic events they experienced compared to their urban counterparts.

Current Study

While research exists examining the relationship between PTG and social support and social support and rurality, no research to date examined the relationship between PTG and rurality or PTG and social support for people in rural areas. The purpose of this study was to bridge the gaps that exist in the literature for these constructs and to examine the extent to which social support may influence the occurrence of PTG in people who live in rural areas.

Since social support in PTG literature has been shown to be contingent upon quality and quantity and because rural areas often times have low quality social support, it was expected that the relationship between quantity of social support and PTG would be moderated by quality of social support. Specifically, it was hypothesized that people living in rural areas would experience the highest levels of PTG if they had high quality, high quantity social support. People living in rural areas experiencing low quality, high quantity social support were expected to have the lowest levels of PTG. The reason people with low quality, high quantity social support were expected to have the lowest levels of PTG was due to the negative effects that could potentially stem from having a large amount of social support that is given very poorly.

Due to the current state of the world and government recommendations on social distancing, it is possible that the nature of individuals' social support is very different from what they were less than a year ago at the time data collection occurred. Specifically, it seemed likely that a great deal of people would be relying on online social support much more than they did previously throughout their lifetime. Therefore, a measurement of online social support was included, in order to conduct exploratory analyses for how online social support related to PTG.

CHAPTER 2

METHOD

Participants

A total of 390 participants were recruited via Amazon Mechanical Turk. There were 100 participants recruited for each of three major variables of the study, plus 30% to account for any quality issues that may have arisen due to using online data collection.

Requirements for participation included being 18 years or older, living in a rural area for at least 5 years, and having experienced a traumatic event at some point throughout their lifetime. Participants were allowed to self-identify whether or not they live in a rural area. As compensation for their participation, participants received a monetary compensation of one USD.

There were 8 participants excluded for not meeting rurality criteria and 9 excluded for not having experienced a traumatic event; therefore 17 of the completed responses were excluded overall, leaving data from 373 participants to be analyzed.

Participants identified as White/Caucasian (*n*= 160; 47.2%), Asian/Asian American (*n*= 120; 35.4%), Black/African American (*n*= 37; 10.9%), American Indian/Native American (*n*= 16; 4.7%), Mexican American/Latino/a (*n*= 4; 1.4%), and Multiracial (*n*= 1; 0.3%). There were 2 (0.6%) participants who declined to answer. There were 245 males (72.3%) and 88 females (26%). There was 1 participant (0.3%) who declined to answer and 5 participants (1.5%) who did not respond to this question. When asked their age, 264 participants provided an invalid response. However, of those who provided a valid response (*n*= 101), participants ranged in age from 18-54 (*M* = 27.22, *SD*= 9.588). Participants identified as mostly heterosexual (181; 53.4%), bisexual (*n*=128; 37.8%), gay (*n*= 8; 2.4%), questioning (*n*=7; 2.1%). mostly gay/lesbian (*n*= 3; 0.9%), and lesbian (*n*=2; 0.6%). There was 1 (0.3%) participant who identified as a better description not specified; there were 9 (2.7%) participants who declined to answer.

Materials

Qualtrics was provided by the university and was used to administer the survey to participants. Participants needed an Internet connection in order to access the survey, which they were able to complete on a variety of electronic devices, such as a phone, tablet, or a computer. Participants were asked a series of demographic questions (See Appendix A).

The Life Events Checklist for *DSM-5* (LEC-5; Weathers et al., 2013; See Appendix B) Standard Version was used to assess whether or not someone had experienced a traumatic event. The LEC-5 was adapted from the Life Events Checklist (Gray et al., 2004) in order to be consistent with the *DSM-5*. The original Life Events Checklist had a retest correlation of $r = .82$, $p < .001$ after one week. The LEC-5 lists seventeen traumatic events and asks participants to indicate whether or not they had experienced that event at any point in their lifetime, either directly or indirectly, by the following list: "(a) it happened to you personally; (b) you witnessed it happen to someone else; (c) you learned about it happening to a close family member or close friend; (d) you were exposed to it as part of your job (for example, paramedic, police, military, or other first responder); (e) you're not sure if it fits; or (f) it doesn't apply to you." (Weathers et al., 2013, p. 1). An example of an event is "Life-threatening illness or injury."

The Posttraumatic Stress Disorder Checklist (PCL-5; Weathers et al., 2013; See Appendix C) was used to measure PTSD severity, in order to compare PTSD severity to amount of PTG. The PCL-5 has a Cronbach's alpha of .94 and a test-retest reliability of .82 (Blevins et al., 2015). Additionally, the PCL-5 demonstrated strong convergent (*rs*= .74-.85) and discriminant (*rs*= .31-.60) validity. The PCL-5 was scored on a five-point Likert-type scale and contains seventeen questions. Participants were asked to rate how much they had been affected by each problem in the last month. An example of a statement was "Feeling *very upset* when *something reminded* you of a stressful experience from the past?" The total score of the PCL-5 was used in data analysis. For this study, the PCL-5 had a Cronbach's alpha of .95.

The Posttraumatic Growth Inventory-Expanded (PTGI-X; See Appendix D) was used to measure PTG (Tedeschi et al., 2017). The PTGI-X is a revision of the PTGI (PTGI; Tedeschi & Calhoun, 1996). The PTGI-X was developed by assessing participants from three different countries in order to better

measure spiritual-existential experiences for more diverse populations than allowed for by the original PTGI; the only difference between the two scales was the addition of four questions that measured spiritual-existential experiences (Tedeschi et al., 2017). A factor analysis determined that the PTGI-X had the same 5-factor structure as the original version. Internal reliability was .97 for participants from the United States, .96 for participants from Turkey, and .95 for participants from Japan. The PTGI was scored on a six-point Likert scale and consisted of 25 statements. Participants were asked how much each statement reflected a change that occurred in their lives due to a traumatic event. An example of a statement was "Having compassion for others." The total score of the PTGI-X was used to measure PTSD severity. For this study, the PTGI-X had a Cronbach's alpha of .95.

The Interpersonal Support Evaluation List-12 (ISEL-12; Cohen et al., 1985; See Appendix E) was used to measure perceived social support. It has adequate reliability, with an internal consistency of α=.74-.84 on all scales it was compared against (Merz et al., 2014). The ISEL-12 was tested against measures of social network integration, perceived stress, anxiety, depression, and life engagement; all correlations were found in the expected direction, thus establishing convergent validity. The ISEL-12 was scored on a four-point Likert-type scale and contains twelve questions. Participants were asked to select which statement most reflected what was true about them. An example of a statement was "If I were sick, I could easily find someone to help me with my daily chores." The total score of the ISEL-12 was used to measure the quantity of social support. For this study, the ISEL-12 had a Cronbach's alpha of .58.

The Quality of Social Support Scale (QSSS; See Appendix F) was used to measure the quality of support people received from their relationships (Goodenow et al., 1990). It has an internal consistency of α=.87. Additionally, the QSSS was shown to have both construct and discriminative validity. The QSSS consisted of 17 questions that were scored on a four-point Likert-type scale. Participants were asked to rate the degree to which each statement was true. An example statement was "The important people in my life accept me as a I am, including both my worst and my best points." The total score of the QSSS was used to measure the quality of social support. For this study, the QSSS had a Cronbach's alpha of .69.

The Online Social Support Scale (OSSS; See Appendix G) was used to measure which online sources people use to connect with other people, how much they use those online sources, and how often things occur for them while interacting with others online (Nick et al., 2018). The OSSS was developed in order to study how people are affected by online social support. The OSSS has four subscales, all with high reliability: Esteem/Emotional Support (.95), Social Companionship (.94), Informational Support (.95), and Instrumental Support (.95). The OSSS consists of two sets of questions; both of which are scored on four-point Likert-type scales. The first set asks people how much they use a list of 24 specific websites, apps, services, and games in order to connect/interact with others; it also gives them the option to list any additional online sources they use to interact with others. Example sources include Reddit or Facebook. The second set of questions consists of 40 statements which asks people to rate how often certain things happened to them while interacting with other people online within the last two months. An example statement was "Online, I belong to groups of people with similar interests." The total score of the second set of questions, which ask about interactions with others online, on the OSSS was used to measure the amount of online social support that people received. For this study, the OSSS had an overall Cronbach's alpha of .98.

Procedure

Participants were recruited via Amazon Mechanical Turk. Once agreeing to the informed consent, they were asked to self-identify as living in a rural area. If they indicated they did not live in a rural area, they were not allowed to proceed with the study. If they indicated that they did live in a rural area, they moved on to answer demographic questions. Next, participants were asked to respond to the LEC-5 (Weathers et al., 2013). Next, participants answered the remainder of the surveys, in the order they are presented in the following order: PCL-5, PTGI-X, ISEL-12, QSSS, and OSSS. A validity check took place at the end of the survey, which asked participants to verify they answered all questions honestly and were paying attention. However, participants still received compensation, regardless of whether or not they failed the validity check.

After data collection was completed, responses were analyzed. Any participant (n= 9) who indicated they had no exposure to any traumatic event at any point throughout their lifetime or who were unsure of whether or not they experienced any traumatic events were excluded from data analysis.

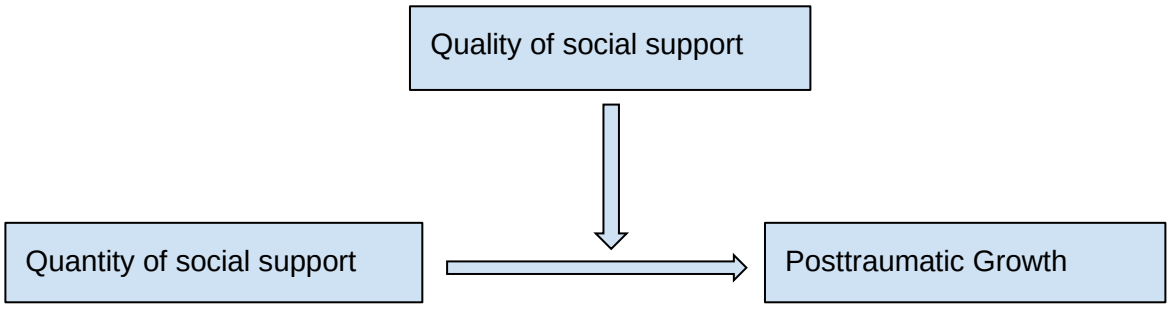
Data Analytic Plan

While having a diagnosis of PTSD was not mandatory for participation in the study, PTSD severity was measured in order to examine the degree to which people experience negative outcomes of traumatic events. While not a main hypothesis of the study, PTSD severity was compared to PTG across participants to see if there was any relationship between the two variables.

Moderation analyses were performed, using steps outlined by Aiken and West (1991) and Cohen and colleagues (2003). A series of hierarchical multiple regression models were used to test the hypothesis that quality of social support would moderate the relationship between quantity of social support and PTG. Centered interaction terms were computed using the PROCESS v2.13 macro for SPSS (Hayes, 2013; Hayes & Preacher, 2013). In Model 1, PTG was the only variable entered in the model. In Model 2, PTG and quality of social support were entered into the model. In Model 3, PTG, quality of social support, and quantity of social support were entered into the model. See Figure 1 for a conceptual model of the moderation.

Figure 1

Conceptual Model of Expected Outcome



CHAPTER 3

RESULTS

Correlations

A one-sample K-S test was used to test for normality of the sample for PTSD severity, PTG, quality of social support, quantity of social support, and online social support. Normality was not assumed for any of the variables, so Spearman's rank order correlations were used to measure the relationship between all variables.

One goal of the study was to test whether or not there was a statistically significant relationship between PTSD severity and PTG for people in rural areas, so a Spearman's rank order correlation was performed to test this. There was a statistically significant relationship between PTSD severity and PTG, r_s (241) = .405, $p < 0.001$. Thus, participants who experienced increased PTSD severity also experienced increased PTG. While there was not a directional hypothesis about the relationship between these variables, it was important to note whether or not the two were related at all in this sample.

The main purpose of this study was to determine the role of both the quality and the quantity of social support on PTG in rural individuals. There was a statistically significant relationship between quality of social support and PTG, r_s (261) = .322, $p < .001$. Thus, participants who had higher quality social support experienced more PTG. However, there was not a statistically significant relationship between quantity of social support and PTG, r_s (270) = -.083, $p = .172$.

Another purpose of this study was to examine whether or not online social support might be related to PTG in people who live in rural areas. There was a statistically significant relationship between online social support and PTG, r_s (240) = .517, $p < .001$. Thus, participants who had high levels of online social support experienced more PTG.

Table 1

Correlation Matrix of the Relationship for All Major Variables in the Study

Measure	PTG	PTSD Severity	Quality of Social Support	Quantity of Social Support	Online Social Support
PTG	--	.405**	.322**	-.083	.517**
PTSD Severity	--	--	.106	.144*	.171
Quality of Social Support	--	--	--	-.255**	.327**
Quantity of Social Support	--	--	--	--	-.063
Online Social Support	--	--	--	--	--

Note. "*" denotes a significance of $p<.05$ and "**" denotes a significance of $p<.01$

Moderation Analysis

The main purpose of this study was to determine whether or not quality of social support would moderate the relationship between quantity of social support and PTG in people who live in rural areas. A series of hierarchical multiple regressions were used to test this hypothesis. The overall model summary was statistically significant, F (3, 245) = 15.358, $p < .001$. Quantity of social support was not a statistically significant predictor of PTG, $p = .210$. Quality of social support was a statistically significant predictor of PTG, $p < .001$. There was a statistically significant interaction between quality of social support and quantity of social support on PTG, $p = .011$. Thus, quality of social support statistically significantly moderated the relationship between quantity of social support and PTG, ß= .083.

However, this effect was conditional. The effect of the interaction was not statistically significant when the quality of social support was low ($p = .0859$) or moderate ($p = .210$); the effect of the interaction was only statistically significant when quality of social support was high, $p = .009$. Thus, if quality of

social support was low or moderate, it did not moderate the relationship between quantity of social support and PTG. However, if quality of social support was high, it did have a statistically significant interaction on the relationship. Specifically, when participants had high quality social support and high quantity social support, they experienced the highest levels of PTG; when participants had high quality and low quantity social support, they experienced lower levels of PTG. Therefore, the hypothesis was partially supported. See Figure 2 for a graph of the model. See Table 2 for parameter estimates and confidence intervals of the model.

Figure 2

Graph of Model of PTG by Quantity of Social Support and Quality of Social Support

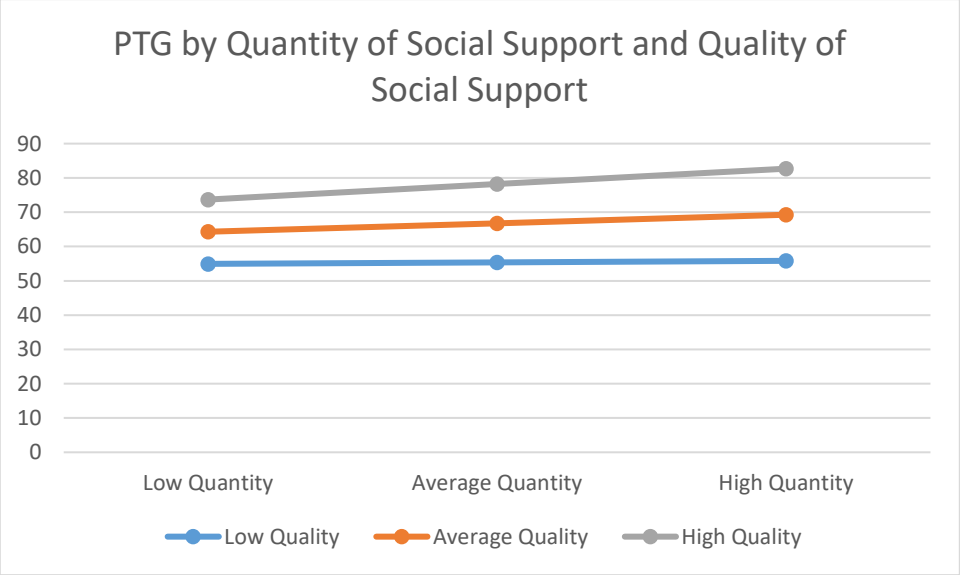


Table 2

Parameter Estimates and Confidence Intervals for Model of PTG by Quantity of Social Support and Quality of Social Support

Measure	Parameter Estimates	Standard Error	*t*	*p*	CI LL	CI UL
Constant	66.786	1.412	47.034	0.000	63.989	69.583
Quantity of Social Support	0.587	0.467	1.256	0.210	-0.334	1.508
Quality of Social Support	1.952	0.295	6.619	0.000	1.371	2.533
Interaction	0.083	0.032	2.549	0.011	0.019	0.146

Exploratory Moderation Analysis

An exploratory moderation analysis was performed to see if online social support would moderate the relationship between quantity of social support and PTG for people who live in rural areas. A series of hierarchical multiple regressions were used to test this hypothesis. Centered interaction terms were computed using the PROCESS v2.13 macro for SPSS (Hayes, 2013; Hayes & Preacher, 2013). In Model 1, PTG was the only variable entered in the model. In Model 2, PTG and online social support were entered into the model. In Model 3, PTG, online social support, and quantity of social support were entered into the model.

The overall model summary was significant, F (3, 228) = 27.425, $p < .001$. Quantity of social support was not a statistically significant predictor of PTG, $p = .965$. Online social support was a significant predictor of PTG, $p < .001$. However, there was not a statistically significant interaction between online social support and quantity of social support on PTG, $p = .491$. Thus, online social support did not statistically significantly moderate the relationship between quantity of social support and PTG, ß= -.005. Therefore, online social support was the only statistically significant predictor of PTG when compared against quantity of social support and the interaction between online social support and quantity of social support. See Figure 3 for a graph of the model. See Table 3 for parameter estimates and confidence intervals of the model.

Figure 3

Graph of Model of PTG by Quantity of Social Support and Online Social Support

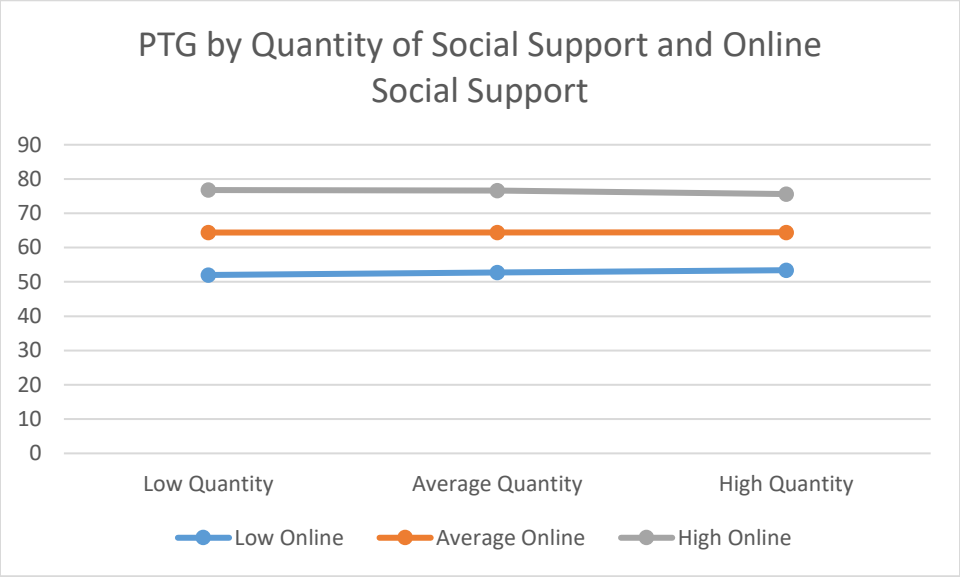


Table 3

Parameter Estimates and Confidence Intervals for Model of PTG by Quantity of Social Support and Online Social Support

Measure	Parameter Estimates	Standard Error	*t*	*p*	CI LL	CI UL
Constant	64.456	1.310	49.213	0.000	61.878	67.049
Quantity of Social Support	0.014	0.310	0.044	0.965	-0.596	0.624
Online Social Support	0.364	0.041	8.869	0.000	0.283	0.445
Interaction	-0.005	0.007	-0.693	0.491	-0.180	0.009

CHAPTER 4

DISCUSSION

General Overview

Overall, this study had several interesting and important findings. First, there was a statistically significant relationship between PTG and PTSD severity. Participants who experienced high PTSD severity also experienced high PTG. This finding seems contradictory to common sense: an event that leads to a lot of distress for an individual would not seem likely to lead to that person also experiencing a lot of growth. However, this finding is supported by theory. According to Tedeschi and Calhoun (2004), people need to experience a significant threat, which is often accompanied by significant psychological distress, in order to experience significant amounts of PTG.

Interestingly, quality of social support was statistically significantly related to PTG, but quantity of social support was not related to PTG. This means that participants who had high quality social support also experienced higher levels of PTG, and participants who had low quality social support experienced lower levels of PTG. However, there was no relationship between quantity of social support and PTG. These findings provide support for the idea that quality of social support received by people in rural areas could play a much more important role in their outcomes to traumatic events than the quantity of social support received.

Additionally, there was also a statistically significant relationship between online social support and PTG. This means that participants who had higher levels of online social support also had higher levels of PTG, and that participants who had lower levels of online social support had lower levels of PTG. A measure of online social support was included to conduct exploratory analyses with the measure, since the COVID-19 pandemic has led to a decrease in in-person social activities. This finding provides initial support for the relationship between online social support and how it might potentially relate to PTG.

For the main purpose of this study, quality of social support did statistically significantly moderate the relationship between quantity of social support and PTG, this effect was conditional. This means that

quality of social support was only a statistically significant moderator on the relationship between quantity of social support and PTG when quality of social support was high; when quality of social support was moderate or low, quality of social support did not moderate the relationship between quantity of social support and PTG. Participants who had high quality and high quantity social support had statistically significantly higher levels of PTG compared to participants who had high quality and low quantity social support. This partially supports the main hypothesis for the study because it was expected that participants with high quality and high quantity social support would experience the highest levels of PTG. However, it was also expected that participants who had high quality and low quality social support would experience the lowest levels of PTG, which was not supported by the data. A potential explanation for this might be that, even for participants with the lowest quality social support, the quality of social support participants were receiving was not low enough to start having negative effects on participants.

Finally, an exploratory moderation analysis found that online social support was the only statistically significant predictor of PTG when compared against quantity of social support and the interaction between online social support and quantity of social support. Therefore, online social support seems to be a very important factor that might determine the degree to which someone from a rural area experiences PTG after a trauma.

Limitations

Overall, this project had several limitations. First, the fact that so many participants provided invalid responses for their age suggests that participants may not have been paying full attention to the survey while completing it. Second, since the data was conducted via mTurk, there is a possibility that answers for the OSSS might have been skewed: since the participants worked online, they could potentially also spend a great deal of time online interacting with others. Thus, they might have been more likely than the general population to have been so strongly influenced by their online social support.

Another limitation is the time period in history in which data was collected. Due to the COVID-19 pandemic, participants have likely faced very recent changes in how frequently they interact with others and with how many people they interact. Thus, there is the possibility that participants were in the process

of adapting to these shifts at the time when data was collected. Additionally, the COVID-19 pandemic likely could have caused participants to have lost someone in their support system, which could have vastly affected their levels of social support. Relatedly, the COVID-19 pandemic could also have increased the likelihood that participants had recently experienced or were currently experiencing a traumatic event. In fact, coping with the negative effects of the COVID-19 pandemic itself could be conceptualized as a traumatic event. Thus, participants may not have all had time to experience PTG after having experienced the trauma. While people can experience PTG while a trauma is still ongoing (Zeligman, 2020), there is still the possibility they may not have had the chance to develop PTG after the occurrence of the traumatic event.

Additionally, we could not locate a survey that was developed to measure quantity of social support. The ISEL-12 was selected due to being a common measure of social support and research sometimes discussing it in terms of measuring social support. However, it was not developed specifically to measure quantity of social support, which could have led to confounds. Finally, the data collected was correlational in nature. Therefore, we are unable to establish a true cause and effect relationship between any of the variables.

Future Research

From this data, there is a great deal of future research that could be conducted. First, replications in community-based samples could be useful in order to set more specific geographic criteria and to determine more conclusively just how "rural" the participants in fact are. Research should also be conducted that compares rural and urban participants in order to see if similar results occur in those who live in urban areas, or if the results are specific to rural populations.

Additionally, it would be highly beneficial to develop a scale that specifically measured quantity of social support. This should perhaps be the first step taken before any additional research on the topics is conducted, as it would allow the results to be a great deal more valid. Additionally, much more research needs to be done that examines the relationship between online social support and PTG, as there seems to be a strong relationship between the two.

Also, a longitudinal study could be used to help establish temporal precedence for the variables that were measured. For example, a study could be done that followed people immediately after they experienced a traumatic event, six months after, one year after, and five years after. This would allow researchers to see more clearly if PTG developed as a result of the social supports someone had in their life, or if people who experienced PTG changed their social supports.

Implications

Overall, there are several very important implications from this study. First, the results suggest that having high quality social support could potentially be an important factor in determining whether or not someone from a rural area will experience PTG as a result of a traumatic event. This is important because it shows that it may not be enough just for rural individuals to have people there to support them; they likely need people who are truly able to offer them quality support. Quality social support entails support that is easy to obtain and is delivered timely from people who support them and understand what they are going through. For example, very high quality social support would likely include reaching out to someone in need, rather than them having to reach out to obtain support; being there as quickly as possible when the person is in need and responding to them promptly; and having patience, empathy, and understanding for the person in need, rather than blaming them or telling them to get over the problems they are facing.

In addition, the results highlight how important online social support could potentially be in determining whether or not someone from a rural area will experience PTG as a result of a traumatic event. This is incredibly important because in the past year, people have had to rely on online supports more than ever before in order to connect with others. Furthermore, this is also important in rural areas in general because rural areas tend to have fewer people around. Thus, online social support can be a great alternative to connect with other people. Therefore, results showing that online social support was a very strong predictor of PTG provides hope that people who have had to rely strongly on online communication with others might end up having positive outcomes as a result of doing so.

Overall, results show that having high quality social support and having online social support is important for people in rural areas who have experienced a traumatic event. Therefore, people who live in rural areas should seek out help from people who are truly able to offer them quality help, rather than just seeking out help from whoever is closest by them after experiencing a trauma. The people they seek out could be friends they have made online or who live far away, relatives who live far away, support groups online, or anyone who they feel to be able to offer them quality support. Additionally, it seems likely than even if rural individuals must look to the Internet in order to find high quality social support in the aftermath of a trauma, that online social support received could still be highly beneficial in aiding in positive outcomes from that trauma.

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APPENDIX A

DEMOGRAPHIC QUESTIONS

Do you live in a rural area? | Yes or No

How old are you? | Select from a dropdown box

What race(s) do you most identify with? | White/Caucasian, African American/Black, Asian/Asian American, Mexican American/Latino/a, American Indian/Native American, Multiracial, A better description not specified above

What is your current gender identity? | Male, Female, Female-to-Male (FTM)/Transgender Male/Trans Man, Male-to-Female (MTF)/Transgender Female/Trans Woman, Genderqueer, neither exclusively male nor female, A better description not specified above, Decline to answer

What was your biological sex assigned at birth? | Male, Female, Decline to answer

The town I was raised in is/was | Rural, Urban

The town I live in currently is | Rural, Urban

How many people live(d) in the town you were raised in? | Under 10,000, Between 10,001 and 20,000, Between 20,001 and 30,000, Between 30,001 and 40,000, Between 40,001 and 50,000, Between 50,001 and 60,000, Between 60,001 and 70,000, Between 70,001 and 80,000, Between 80,001 and 90,000, Between 90,001 and 100,000, Between 100,001 and 500,000, Between 500,001 and 1,000,000, Over 1,000,000

How many people live in the town you live in currently? | Under 10,000, Between 10,001 and 20,000, Between 20,001 and 30,000, Between 30,001 and 40,000, Between 40,001 and 50,000, Between 50,001 and 60,000, Between 60,001 and 70,000, Between 70,001 and 80,000, Between 80,001 and 90,000, Between 90,001 and 100,000, Between 100,001 and 500,000, Between 500,001 and 1,000,000, Over 1,000,000

Do you still live in the town you were raised in? | Yes, No, Prefer not to say

What is your highest level of formal education? Less than high school, some high school, High School Diploma/GED, Some college or vocational school, Vocational Degree, college degree, Master's degree, Doctoral degree

What is your current financial resource status? | Poor/impoverished, Some financial resources, Substantial financial resources, Affluent/Rich

Are you a U.S. citizen? | Yes, No

Do you currently live in the U.S.? | Yes, No

What is your current living situation? | Homeless, Live alone, Live with roommate(s) who are not friends, Live with roommate(s) who are friends, Live with family, Other

What is your sexual identity/orientation? | Gay, lesbian, mostly gay/lesbian, bisexual, mostly heterosexual, questioning, a better description not specified

APPENDIX B

LEC-5 STANDARD

Instructions: Listed below are a number of difficult or stressful things that sometimes happen to people. For each event check one or more of the boxes to the right to indicate that: (a) it happened to you personally; (b) you witnessed it happen to someone else; (c) you learned about it happening to a close family member or close friend; (d) you were exposed to it as part of your job (for example, paramedic, police, military, or other first responder); (e) you're not sure if it fits; or (f) it doesn't apply to you.

Be sure to consider your *entire life* (growing up as well as adulthood) as you go through the list of events.

Event	**Happened to me**	**Witnessed it**	**Learned about it**	**Part of my job**	**Not sure**	**Doesn't apply**
1. Natural disaster (for example, flood, hurricane, tornado, earthquake)						
2. Fire or explosion						
3. Transportation accident (for example, car accident, boat accident, train wreck, plane crash)						
4. Serious accident at work, home, or during recreational activity						
5. Exposure to toxic substance (for example, dangerous chemicals, radiation)						
6. Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)						
7. Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)						
8. Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)						

9. Other unwanted or uncomfortable sexual experience						
10. Combat or exposure to a war-zone (in the military or as a civilian)						
11. Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)						
12. Life-threatening illness or injury						
13. Severe human suffering						
14. Sudden violent death (for example, homicide, suicide)						
15. Sudden accidental death						
16. Serious injury, harm, or death you caused to someone else						
17. Any other very stressful event or experience						

APPENDIX C

PCL-5

Instructions: Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

In the past month, how much were you bothered by:	**Not at all**	**A little bit**	**Moderately**	**Quite a bit**	**Extremely**
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4
4. Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
8. Trouble remembering important parts of the stressful experience?	0	1	2	3	4
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4

10. Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4
13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17. Being “superalert” or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4
19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

APPENDIX D

PTGI-X

Participants were asked to identify the degree to which they did or did not experience the particular change (0 = *I did not experience this change as a result of my crisis* to 5 = *I experienced this change to a very great degree as a result of my crisis*). The score range for the total PTGI is 0 to 105 with higher scores indicative of greater growth. Because each domain has a different number of items, the means (ranges from 0 to 5) are reported.

1. Changed my priorities
2. Greater appreciation for value of own life
3. Developed new interests
4. Greater self-reliance
5. Better understanding of spiritual
6. Can count on people
7. New path for life
8. Greater sense of closeness with others
9. More willing to express my emotions
10. I can handle difficulties
11. Do better things with my life
12. Better able to accept
13. Better appreciate each day
14. New opportunities
15. More compassion for others
16. More effort into my relationships
17. Try to change things
18. Stronger religious faith
19. Stronger than I thought I was
20. Learned how wonderful people are
21. Better accept needing others
22. Greater sense of harmony with world
23. More connected with existence

24. Better able to face questions about life/death

25. Greater clarity about life's meaning

Note: Appreciation for life: 13, 2, 1; Personal Strength: 19, 12, 10, 4; New possibilities: 17, 14, 11, 7, 3; Relating to Others: 21, 20, 16, 15, 9, 8, 6; Spiritual and Existential Change: 22, 23, 24, 25, 18, 5

APPENDIX E

12 ITEM INTERPERSONAL SUPPORT EVALUATION LIST

This scale is made up of a list of statements each of which may or may not be true about you. For each statement check "definitely true" if you are sure it is true about you and "probably true" if you think it is true but are not absolutely certain. Similarly, you should check "definitely false" if you are sure the statement is false and "probably false" is you think it is false but are not absolutely certain.

1. If I wanted to go on a trip for a day (e.g., to the mountains, beach, or country), I would have a hard time finding someone to go with me.

____definitely true ____probably true ____probably false ____definitely false

2. I feel that there is no one I can share my most private worries and fears with. ____definitely true ____probably true ____probably false ____definitely false

3. If I were sick, I could easily find someone to help me with my daily chores. ____definitely true ____probably true ____probably false ____definitely false

4. There is someone I can turn to for advice about handling problems with my family. ____definitely true ____probably true ____probably false ____definitely false

5. If I decide one afternoon that I would like to go to a movie that evening, I could easily find someone to go with me.

____definitely true ____probably true ____probably false ____definitely false

6. When I need suggestions on how to deal with a personal problem, I know someone I can turn to.

____definitely true ____probably true ____probably false ____definitely false

7. I don't often get invited to do things with others.

____definitely true ____probably true ____probably false ____definitely false

8. If I had to go out of town for a few weeks, it would be difficult to find someone who would look after my house or apartment (the plants, pets, garden, etc.).

____definitely true ____probably true ____probably false ____definitely false

9. If I wanted to have lunch with someone, I could easily find someone to join me. ____definitely true ____probably true ____probably false ____definitely false

10. If I was stranded 10 miles from home, there is someone I could call who would come and get me.

____definitely true ____probably true ____probably false ____definitely false

11. If a family crisis arose, it would be difficult to find someone who could give me good advice about how to handle it.

____definitely true ____probably true ____probably false ____definitely false

12. If I needed some help in moving to a new house or apartment, I would have a hard time finding someone to help me.

____definitely true ____probably true ____probably false ____definitely false

APPENDIX F

QUALITY OF SOCIAL SUPPORT SCALE QSSS

Items

For each statement, would you indicate whether the statement is *never true* (1), *sometimes true* (2), *mostly or usually true* (3), or *always true* (4).

1. There is someone who will take over my tasks or chores when I feel sick. (Task Assistance)

2. There are people with whom I can expect to have unpleasant disagreements, people who make me angry or upset. (RelaTIonship Strain; reverse for coding scale)

3. The important people in my life accept me as I am, including both my worst and my best points. (AffirmaTIon or Ego Support)

4. There is someone who will give me a hug or hold me in their arms when I need comforTIng. (Physical

5. It's hard to find someone who can give me objecTIve feedback on how I'm handling problems. (InformaTIon and Feedback; reverse for coding scale)

6. There is someone whose advice I really trust. (InformaTIon and Feedback)

7. I can count on someone to listen to my innermost feelings, even when I'm angry at someone or depressed about something. (Opportunity for Confiding)

8. Some of my friends or relaTIves are hard to get along with and seem like more trouble then they're worth. (RelaTIonship Strain; reverse for coding scale)

9. The people I'm closest to are willing to use their skills and abiliTIes to help me out in my everyday life. (Task Assistance)

10. The people I'm close to treat me like a worthwhile person and make me feel I have something posiTIve to contribute. (AffirmaTIon or Ego Support)

11. When I need good informaTIon on how to get things done, I know that I can get it. (InformaTIon and

12. I find it hard to be the sort of person I'd like to be when I'm around relaTIves or friends. (AffirmaTIon or Ego Support; reverse for coding scale)

13. The people I'm close to are physically affecTIonate toward me. (Physical AffecTIon)

14. Someone would loan me money ($) or loan me something else of value if I needed it. (Task Assistance)

15. No one will really listen when I need to talk about personal problems. (Opportunity for Confiding; reverse for coding scale)

16. I can find someone to take me somewhere or run an errand for me if I need to. (Task Assistance)

17. It is easy to talk to my friends and relaTIves about things going on in my life. (Opportunity for Confiding)

Note. Each QSSS statement could be answered as never true (scored 1), someTImes true, mostly or usually true, or always true (scored 4). A_er reversing RelaTIonship Strain and other negaTIvely worded

items, the items were summed for a total QSSS score that could range from 17 (no social support) to 68 (complete support in all areas).

APPENDIX G

ONLINE SOCIAL SUPPORT SCALE (OSSS)

Most sites, apps, services, and games on the Internet can be used in lots of different ways and for different purposes. We're interested in how much you use these online spaces to **connect or interact with other people**.

This means we **are** interested in how much you use these online spaces to talk with people, post, comment, like, send messages, game with others, etc.

This means we are **not** interested in how much you use these online spaces to scroll through other people's posts, watch or read content, or just look up information.

How much do you use the following sites, apps, services, or games to **connect or interact with other people?**

0 = Never 1 = Rarely 2 = Sometimes 3 = Pretty Often 4 = A lot

Facebook	0 1 2 3 4
Instagram	0 1 2 3 4
Twitter	0 1 2 3 4
SnapChat	0 1 2 3 4
Tumblr	0 1 2 3 4
Vine	0 1 2 3 4
YouTube	0 1 2 3 4
Pinterest	0 1 2 3 4
Reddit	0 1 2 3 4
YikYak	0 1 2 3 4
Kik	0 1 2 3 4
LinkedIn	0 1 2 3 4
GroupMe	0 1 2 3 4
WhatsApp	0 1 2 3 4
Google+	0 1 2 3 4
Whatsgoodly	0 1 2 3 4

Chat services	0 1 2 3 4
Email	0 1 2 3 4
Texting	0 1 2 3 4
Dating sites/apps (e.g., Tinder)	0 1 2 3 4
First person shooter games (e.g., Call of Duty)	0 1 2 3 4
Battle arena games (MOBAs: e.g., League of Legends)	0 1 2 3 4
Sports/fighting/racing games (e.g., FIFA, Street Fighter, Mario Kart)	0 1 2 3 4
Role-playing games (RPGs: e.g., World of Warcraft)	0 1 2 3 4
If you interact with people using other sites, apps, services, or games, please write them in and rate how often you use them:	
_____	0 1 2 3 4
_____	0 1 2 3 4
_____	0 1 2 3 4

Now, think about the online spaces you use above. Rate **how often** the following things have happened for you **while you interacted with others** online over the last two months. Use the following scale:

0 = Never 1 = Rarely 2 = Sometimes 3 = Pretty Often 4 = A lot

1.	People show that they care about me online.	0 1 2 3 4
2.	Online, people say or do things that make me feel good about myself.	0 1 2 3 4
3.	People encourage me when I'm online.	0 1 2 3 4
4.	People pay attention to me online.	0 1 2 3 4
5.	I get likes, favorites, upvotes, views, etc. online.	0 1 2 3 4
6.	I get positive comments online.	0 1 2 3 4
7.	When I'm online, people tell me they like the things I say or do.	0 1 2 3 4
8.	Online, people are interested in me as a person.	0 1 2 3 4
9.	People support me online.	0 1 2 3 4

10.	When I'm online, people make me feel good about myself.	0 1 2 3 4
11.	When I'm online, I talk or do things with other people.	0 1 2 3 4
12.	People spend time with me online.	0 1 2 3 4
13.	People hang out and do fun things with me online.	0 1 2 3 4
14.	Online, I belong to groups of people with similar interests.	0 1 2 3 4
15.	People talk with me online about things we have in common.	0 1 2 3 4
16.	Online, I connect with people who like the same things I do.	0 1 2 3 4
17.	I am part of groups online.	0 1 2 3 4
18.	When I'm online, people joke and kid around with me.	0 1 2 3 4
19.	People relate to me through things I say or do online.	0 1 2 3 4
20.	Online, people make me feel like I belong.	0 1 2 3 4
21.	When I'm online, people give me useful advice.	0 1 2 3 4
22.	Online, people provide me with helpful information.	0 1 2 3 4
23.	If I had a problem, people would help me online by saying what they would do.	0 1 2 3 4
24.	Online, people would tell me where to find help if I needed it.	0 1 2 3 4
25.	People help me learn new things when I'm online.	0 1 2 3 4

26.	People offer suggestions to me online.	0 1 2 3 4
27.	People tell me things I want to know online.	0 1 2 3 4
28.	When I'm online, people help me understand my situation better.	0 1 2 3 4
29.	If I had a problem, people would share their point of view online.	0 1 2 3 4
30.	People help me see things in new ways when I'm online.	0 1 2 3 4
31.	People online would help me with money or other things if I needed it.	0 1 2 3 4
32.	When I'm online, people help me with school or work.	0 1 2 3 4
33.	Online, people help me get things done.	0 1 2 3 4
34.	If I needed a hand doing something, I go online to find people who will help out.	0 1 2 3 4
35.	Online, people offer to do things for me.	0 1 2 3 4
36.	Online, people help me with causes or events that I think are important.	0 1 2 3 4
37.	When I'm online, people have offered me things I need.	0 1 2 3 4
38.	When I need something, I go online to find someone who might lend it to me.	0 1 2 3 4
39.	When I need a hand with school or work things, I get help from others online.	0 1 2 3 4
40.	I contact people online to get help or raise money for things I think are important.	0 1 2 3 4