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Running head: EXAMINATION OF RESILIENCE AND GENDER IN PFA

J. N. Andrews Honors Program
Andrews University

HONS 497
Honors Thesis

An Examination of Resilience over Time between Men and Women in Psychological First Aid


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Behavioral Sciences

Abstract

Research has shown that Psychological First Aid (PFA) crisis intervention helps to promote resilience in individuals affected by traumatic events (Everly, 2012). This study examined differences in resilience levels between genders over time by comparing PFA with a Social Acknowledgment (control) condition. Using the Response to Stressful Events Scale (Johnson et al., 2011) to measure resilience, subject responses ($N = 41$) were analyzed using a mixed between-within subjects ANOVA. Results indicated that there were no statistically significant main effects or interactions. These findings do not support the study's hypotheses that there would be a significant interaction between time and gender.

Keywords: resilience, psychological first aid, social acknowledgment, post-trauma distress, disaster, support

An Examination of Resilience over Time between Men and Women in Psychological First Aid

In the past decade, there has been a rise in disasters across the whole world. The traumatic nature of these disasters has created a surge of demand for the availability of disaster behavioral health responders to provide mental health services after the disaster. Due to the variability in ways that people experience stress, the stress signals they may present can affect how they receive help. The post-trauma distress that can be experienced after a disaster can lead to the development of adverse effects such as poor mood, anxiety, and ineffective coping skills. Individuals can also be affected by other varying amounts of ways, not only can it have psychological effects, but also cognitive, emotional, physical, behavioral and even spiritual effects. Disaster behavioral health (DBH) responders are expected to provide assistance and critical care to these affected individuals. Thus, the use of intervention methods to combat the adverse effects of trauma is extremely beneficial.

According to Galea (2005), a disaster can be defined as a mass traumatic event which affects multiple persons and it is frequently followed by a large scale of loss of personal property and financial hardship. In the aftermath of a disaster, acute distress, or Acute Stress Disorder (ASD) may plague those individuals who have experienced the traumatic event. Bryant and Harvey (2003) proposed that the presence of ASD in an individual may depict acute trauma reactions that purportedly predict subsequent Post-Traumatic Stress Disorder (PTSD) symptoms. These can include detachment, hypervigilance, sleep disturbance, regressive behavior, re-experiencing of trauma, and anger outbursts. According to Shansky (2015), PTSD occurs in only a small fraction of trauma-exposed individuals, however, the study found that the risk of being adversely affected following a traumatic event is twice as high in women as in men.

Due to the rise in disasters across the globe, the need for more effective intervention methods has also risen. The concept of psychological first aid (PFA) was first posited 60 years ago by the American Psychiatric Association (APA) under a published monograph titled *Psychological First Aid in Community Disasters* (APA, 1954). The purpose of PFA is to help reduce an individual's post-trauma distress, as well as to provide support to the individual for both short and long-term adaptive functioning. Since the first introduction to PFA, there have been a plethora of different models of PFA claiming to use evidence-based practices (i.e. Brymer et al. PFA model developed in 2006). The model of intervention that is the focus of this study is the John Hopkins RAPID-PFA (Rapport and Reflective Listening, Assessment, Prioritization, Intervention, and Disposition). Everly and Flynn (2006) define this intervention method as a "compassionate and supportive presence" which may be able to help lessen the effects of acute distress after a traumatic event as well as to help assess an individual's need for additional mental health care. Thus, individuals who are adversely affected following a traumatic event benefit greatly from such interventions. PFA can serve as an essential key to promoting resilience in those who have been affected by a trauma.

The biggest difference that should be noted between the original PFA model and the RAPID-PFA model is that the former requires those implementing the intervention method to be trained DBH responders, however, the latter model was developed in such a way that non-mental health trained personnel can also implement this intervention method, as long as they have been RAPID-PFA trained. This has, in turn, increased the availability of trained personnel who are able to meet the surges in demand for mental health support after traumatic events. Another major aspect of RAPID-PFA are the steps taken throughout the intervention method. The RAPID acronym stands for Rapport and Reflective Listening, Assessment, Prioritization, Intervention,

and Disposition. The first step, Rapport and Reflective Listening (which are the techniques used in this study), utilizes active listening techniques and demonstrates empathy to the traumatized victim. In the Assessment step, trained personnel will first ask the affected individuals questions and then will screen their answers to determine if there are indicators that demonstrate their inability to cope with the trauma, thus, warranting exploration into their capacity to demonstrate adaptive mental and behavioral functioning. Second, if needed a brief assessment will be done to determine what factors are either helping or hindering the individual's rapid recovery. The next step, Prioritization, consists of assessing the functional needs of the victim and helping them to get their physical and medical needs met first. Then during the Intervention step, the trained responder will help the victim reduce their acute distress by using stress management techniques (such as positive self-talk) as well as cognitive/behavioral techniques (such as using relaxed breathing). In the final step, Disposition, the trained individual will determine if the survivor has regained the functional capacity to engage in the basic activities of daily living or if they need to be referred to other clinical or social support.

Since PFA is a psychological crisis intervention tool one of its key components is to help promote resilience in individuals who experience distressing traumatic events (Everly, 2012). Previous researchers have defined resilience as an individual's ability to effectively adapt or cope with change or adversity (Wagnild & Young, 1993; Everly, Welzant, & Jacobson, 2008). Bonanno (2008), added to this definition by claiming that it was not only an individual's ability to adapt but also, "maintain relatively stable, healthy levels of psychological and physical functioning" (p.102). Thus, resilience is an individual's ability bounce back after a traumatic event by coping with its adverse effects and maintaining a healthy level of functioning in daily life.

It has been widely recognized that gender is an important variable in understanding various aspects of human behavior. In other disciplines sex and gender are seen as two different variables; however, within the field of psychology gender and sex are used interchangeably. Stewart and McDermott (2004) suggested that the social or conceptual significance of gender is often not given much conscious thought in psychology, but rather it is used more empirically. For the purpose of this current study, the social significance of gender will be examined due to a paucity of research that has been done in PFA and other intervention methods in regards to resilience and stress susceptibility in each gender.

As previously mentioned Shansky (2015) found that the risk of being adversely affected following a traumatic event is twice as high in women as in men. In today's societies, an individual's willingness to report stress is highly gendered; which is why research by Hirani et al. (2016), has found that women tend to talk about their stressors, vent their emotions and seek social support. In contrast, traditional male roles encourage men to deny any symptoms of stress and places emphasis on internalization of negative emotions (Hirani et al., 2016). This could be a reason why women are typically seen as being more susceptible to the adverse effects of traumatic situations. Despite little research being done on resilience in regards to gender, previous research has found that gender is a predictive factor of resilience (Bonanno, Galea, Buccarelli, & Vlahov, 2007).

Present Study

The current study is based on an ongoing study whose purpose is to examine the efficacy of PFA on anxiety, mood, resilience and electrodermal activity compared to a Social Acknowledgment (SA) condition and expressive writing. However, the current study sought to examine whether resilience levels in males and females differed over the course of the PFA

intervention method process. Since only a paucity of research has been done on resilience before the implementation of PFA or other intervention methods the purpose of this study was to get a baseline of resilience levels from both males and females, thus, obtaining information of individual's resilience levels under normal circumstances. This study also examined whether females are in fact less resilient than their males counterparts and whether they are more susceptible to adverse effects after experiencing a trauma. This study posited that women would initially have an overall lower score in the resilience measure (Johnson et al., 2011); however, they would show an increase in their resilience levels over time with the implementation of PFA. In contrast, men would initially have an overall higher score on the resilience measure (Johnson et al., 2011); however, with the implementation of PFA, no increase in resilience levels will be detected over time.

Methodology

Participants

The subjects ($N = 41$) for this study were recruited from the Andrews University Behavioral Science Research Participation Pool. All subjects had to meet the minimum age requirement of 18 and had to agree to discuss a personally stressful event that had occurred in their lives. Students who are part of the research participation pool are required to earn a specific number of research participation credits for their psychology classes, thus, participants received two research credits for participating in this particular study. Due to the significant time commitment required in this study, participants who completed the study in its entirety were compensated with not only research participation credit and received \$15 in cash.

The experiment consisted of, 26.8% male subjects and 73.2% female. In the PFA condition, there were 12.2% males and 29.3% females, while in the SA condition there were

14.6% males and 43.9% females. The majority were single (78.0%), followed by dating (19.5%). The majority indicated that they were Asian (39.0%), followed by White (26.8%), African American (26.8%), Latino (14.6%), Multiracial (9.8%), and West Indian (2.4%). The age of participants ranged between 18 and 36 years old ($M_{age} = 20.0$, $SD_{age} = 3.05$). Religious affiliation was Seventh-day Adventist (95.1%), Protestant (2.4%), and "None" (2.4%).

Based on the large effect size of the original study by Everly et al. (2016), a power analysis was conducted in order to determine the sample size for this study. Using an effect size of Cohen's $f = .25$ and power set of .99, it was estimated that for the ongoing study 100 subjects would be required to study a moderate efficacy occurrence. In order for the current study to have moderate power, it was determined that data had to be gathered from a total of 50 subjects. In both instances, males and females would be randomly assigned to either condition, PFA or SA.

Measures

The participants were given a demographic questionnaire which requested data such as age, gender, ethnicity, number of credits being taken in the semester, religious affiliation, and the frequency in which they engage in particular religious practices and behaviors. In order to accurately measure resilience levels, this study utilized the 22-item Response to Stressful Events Scale (RSES) developed by Johnson et al. (2011). This instrument assessed resilience by measuring an individual's differences in cognitive, emotional, and behavioral responses to stressful life events. This instrument complements already existing measures of resilience such as the Connor-Davidson Resilience Scale (CD-RISC), the PTSD Checklist-Military (PCL-M), and the Dispositional Resilience Scale-15 (DRS-15). The RSES asks questions such as, "During life's most stressful events I tend to: 'Face my fears' ... 'Find meaning from the experience' ... 'Lean on my faith in God or a higher power'" (Johnson et al., 2011). All items in

the RSES are positively scored on a 5-point Likert scale, (0 being “Not at all like me” to 4 being “Exactly like me”). According to Johnson et al. (2011), resilience levels are as following: high ranges from 88 to 71, moderate ranges from 70 to 50, and low ranges from 49 to 0. The resilience scale has been shown to demonstrate strong internal consistency with Cronbach’s alpha level ranging between .91 and .93, and was also found to have good test-retest reliability ($r = .87$; Johnson et al., 2011).

Group Conditions

There are two experimental conditions for this study: RAPID-PFA (experimental) and Social Acknowledgment (control).

Psychological first aid condition. In the RAPID-PFA condition, the participant was asked to speak about a personally stressful life experience for 10 consecutive minutes while the experimenter provided the RAPID-PFA intervention; specifically using reflective listening techniques. This listening technique helped to drive the effectiveness of the communication between the researcher and the subject. Reflective listening’s key characteristics are that the researcher is willing to listen, gain rapport with the subject, demonstrate value in what the subject has to say and a desire to assist in problem solving. Thus, if a subject said something like “I have been told I can’t live in my house anymore after the flood. Something about the mold. I just don’t understand. The house is as solid as a rock!” the researcher implementing PFA could respond by stating “Sounds like the fire was devastating on so many levels,” this demonstrates that the researcher acknowledges and validates both the impact of the loss and it also opens the door for the subject to discuss personal losses beyond the tangible. (Everly, 2008). The researcher implementing the PFA intervention method must provide a sense of interpersonal support, which is the single best predictor of human resilience.

An instructional prompt created by Gortner, Rude and Pennebaker (2006), was used in order to guide participants discussion content, as well as maintain consistency in the researcher's interaction with the subject. Maintaining consistency was important because it helped to maintain reliability within the study itself, it also helped the researcher to have a consistent set of steps to follow and it also helps the subject to feel comfortable with the professionalism demonstrated by the student researcher. By having reliability in the study, it can increase one's confidence that the desired results (increased resilience levels in women and no change for men over time) are due to the implementation of PFA and not to an unknown variable. The prompt was modified to state the following:

For the next 10 minutes, I would like for you to speak about your very deepest thoughts and feelings about a stressful life experience that has affected you and your life. In your speaking, I'd like you to really let go and explore your very deepest emotions and thoughts. You might tie your topic to your relationships with others, including parents, lovers, friends, or relatives; to your past, your present, or your future; or to who you have been, who you would like to be, or who you are now. All of your speaking will be completely confidential. The only rule is that once you begin talking, you continue until the time is up.

Social acknowledgment condition. The SA condition is the control condition for this study. Thus, the subjects assigned to this condition served as the basis of comparison for the subjects who are in the PFA condition. Everything within the control condition was the same except that the subjects did not receive PFA to help them deal with their acute distress. For this condition, the participant was asked to speak about a personally stressful life experience for 10 consecutive minutes while the experimenter actively listened. In contrast to the RAPID-PFA

method where the researcher would provide empathetic feedback, in the SA condition the researcher would not give empathetic statements, but rather would give a simple head nod when appropriate. Thus, if the subject said, “I lost my home in the fire. I lost a lot of things of value to me—not just financial value but personal value,” the researcher would respond by slightly nodding their head and keeping a stoic face. In order to maintain reliability within the study the same instructional prompt by Gortner, Rude and Pennebaker (2006), which was used in the RAPID-PFA condition was also used for the Social Acknowledgment condition.

Procedure

Prior to the commencement of the study, the experimenter was trained in the administration of the RAPID-PFA model and in the SA model by using a course developed by the John Hopkins Center for Public Health Preparedness and the John Hopkins Bloomberg School of Public Health. The course is comprised of seven modules along with supplemental PowerPoint material and requires 6 hours to be completed.

Data collection began immediately after IRB approval was attained on August 15, 2017. With obtained IRB approval, recruitment email messages about the study were sent to all students in the Behavioral Sciences Research Subject Pool. The email directed the students to the behavioral science research website, in which they followed the subject pool’s standard instructions to sign-up for any time-slot of their choosing. The subject would receive a reminder email a day before they were scheduled to participate in the study.

This study used a randomized control trial (RCT) in order to allocate participants at random to one of the two conditions, PFA or Social Acknowledgment. The first three sessions of the study, included a baseline gathering period, a disclosure period, an after-disclosure period and the post 30-minute period. First, the participant would arrive at the Behavioral Sciences

Research Center Cog Lab 3, during the time-slot they had selected during their online sign-up. Once the researcher and subject were both situated in the lab room the researcher would give a brief introduction to the study and would prompt the participant to the consent letter on the computer screen to review before the commencement of the experiment. The informed consent advised them of the requirements to be eligible for this study as well as possible risks they may incur. Once they had read over the consent letter and had given an electronic consent to participate in the experiment, the subject would be directed to the HashID tab on the screen, which prompted them to type in their ID number. The purpose of the HashID website was to provide a non-reversible code when an ID number is imputed. This helped to keep the identity of the participant non-accessible and confidential. The website also helped to provide a reliable identifier for each participant, enabling the researcher to ensure that the data collected at each section of the study corresponded to the contributing participant.

Once the participant had received their HashID they were directed to Limesurvey to begin the initial survey portion of the study, thus beginning session 1, the baseline gathering period. The survey was composed of a demographic questionnaire and the RSES. After the survey was completed the disclosure period commenced, where the participant was asked to talk about stressful life experiences or other related feelings after reading the prompt. Once the 10 minutes lapsed, session 2, the after-disclosure period began, where the participant repeated and completed the survey. During session 3 the survey was then completed again, 30 minutes after the after-disclosure period. Following the completion of the post 30-minute period, the participant received a debriefing pamphlet which gave tips for simple stress management strategies and information on how to access campus counseling if needed. Before leaving the lab, the participant was given the opportunity to select a date and time to complete session 4 of the

study, at this point the researcher also granted them two research participation credits for their participation in the study so far. The participants returned for session 4 following a post-15 day period, at which time the participants completed the survey composed of the RSES one final time. Once the survey was completed the researcher released the \$15 cash compensation to the subject for their time invested in the study. (See Appendix A for Table A1 illustrating the procedure).

Results

A mixed between-within subjects ANOVA was used to determine whether resilience levels in males and females differed over the course of the PFA intervention method process. The within-subjects ANOVA was conducted in order to compare resilience scores on the RSES at session 1 (Baseline), session 2 (After Disclosure), session 3 (Post 30-Minutes), and at session 4 (Post 15-days). The results demonstrated no statistically significant main effect for time to condition, $F(3, 41) = .314, p = .815, \eta_p^2 = .015$, or time to sex, $F(3, 41) = 1.565, p = .207, \eta_p^2 = .069$. Results also demonstrated that there was no statistically significant interaction effect between time, condition and sex, $F(3, 41) = .536, p = .660, \eta_p^2 = .025$.

The between-groups ANOVA explored the impact of sex and condition on resilience levels as measured by the RSES (Johnson et al., 2011). The subjects were randomly divided into one of the two conditions: PFA or SA. In the PFA condition, there were 5 males and 12 females, while the SA condition had 6 males and 18 females. The results indicate that the main effect for condition, $F(1, 41) = .493, p = .490, \eta_p^2 = .023$, and the main effect for sex, $F(1, 41) = 1.515, p = .218, \eta_p^2 = .071$, did not reach statistical significance. It also demonstrated that the interaction effect between condition and sex was not statistically significant, $F(1, 41) = .089, p = .768, \eta_p^2 = .004$.

Discussion

The current study investigated whether the PFA intervention method had an impact on resilience scores in males and females over time. After conducting a mixed between-within ANOVA, no significance was found for both, main and interaction effects. This study posited that women would exhibit increasing resilience levels over time, however, men would exhibit no change. The results indicate that no significance was found for an increase in resilience for either gender or condition. Thus, males and females in each condition (PFA or SA) did not differ in terms of their resilience scores. The results also demonstrated that the PFA intervention method did not demonstrate a statistically significant effect in increasing resilience levels over time for either gender.

Although no statistical significance was found in this study, interesting patterns can be observed by looking at the RSES mean scores for each session (See Tables and Figures in Appendix B). The current study posited that with the implementation of PFA an observable increase in women's resilience levels would be noted, in contrast for men there would be no change. Because the SA condition is the control condition for PFA in which no treatment is being implemented, this study also expected that no change in resilience levels would occur during this condition; rather, resilience levels were expected to stay the same across the four sessions. As seen in Appendix B the RSES means scores in the SA condition seem to fluctuate around the 61-70 range for males and around the 56-57 range for females. According to Johnson et al. (2011), both males and females are demonstrating moderate resilience levels.

Stress can affect individuals in a varying amount of ways, and due to this variability the stress signals they may present can affect how they receive help. Seligman (2011) notes that after particularly distressful events some people may reel, recover, and move on with their lives, in

contrast, others may get bogged down by anxiety, depression, and fear of the future. It is a social misconception that resilience is a fixed quality, that a person either has the capability to bounce back from a traumatic event or they do not (Waller, 2001). Everyone has the ability of being resilient, through intervention methods people can learn to establish or strengthen their resiliency skills (Rutter, 1987; Werner & Smith, 1982). The risk and protective factors that individuals employ after a traumatic event may not always be the same, thus, this may be why the fluctuation in resiliency scores for males in females during the SA condition may be observed.

This variability in stress symptoms and signals observed in individuals can also account for the patterns seen in the mean RSES scores in the PFA condition. For males an increase in resilience scores is seen from session 1 ($M = 69.4$) to session 2 ($M = 74.5$) and session 3 ($M = 74.2$); however, this seems to decline again at session 4 ($M = 65.2$), despite the hypothesis that resilience would not change over time for men (see Table B1 and Figure B3 in Appendix B). This increase in resiliency during session 2 and 3 could be due to psychosocial stress. The main experimenter for this study was female which according to Chapman, Benedict, and Schiöth (2018) can greatly impact heterosexual males. Between session 1 and 2 there is a 10-minute disclosure period in which the participant is prompted to speak about a personally stressful life experience. Because traditional male roles encourage men to deny any symptoms of stress and places emphasis on internalization of negative emotions (Hirani et al., 2016), the need to make a good impression, appear competent, and likable are very important (Chapman et al., 2018). Thus, the psychosocial stress created by the male participants of the study during this time may cause them to use their resiliency skills more during session 2 and 3.

The long 15-day period separating the 4th session from the first three may have contributed to the decrease in resilience scores seen at session 4 ($M = 65.2$). Previous research

shows that rumination is positively correlated with depression (Sullivan, Bishop, & Pivik, 1995; Carver, Scheier, & Weintraub, 1989; Garnefski et al., 2001). Although rumination could have occurred during the 15 days between sessions, research shows that men generally have less ruminative styles (Nolen-Hoeksema, 1991). Rather than ruminating over the stressful life experiences discussed during the 10-minute disclosure period and amplifying the adverse effects that can be associated with the experience, the male participants could be choosing to not dwell on the issue. Thus, resilience levels in session 4 were lower because their resiliency skills were not needed.

This study hypothesized that females would initially have lower resilience levels however with the implementation of the PFA intervention method they would increase over time. For females, the mean RSES scores seem to increase from session 1 ($M = 55.3$) to session 2 ($M = 61.8$); however, they decline slightly at session 3 ($M = 59.5$) and session 4 ($M = 58.8$) (see Table B2 and Figure B4 in Appendix B). The increase in resilience levels for session 2 was expected due to the fact that women are two times more likely to be adversely affected following a traumatic event (Shansky, 2015). Thus, they must use their resiliency skills to combat these adverse effects, whereas the decrease in resilience levels in session 3 and session 4 could be attributed to the gaps in time between sessions (30-minutes and the 15-days) or due to rumination occurring post-intervention. These time gaps between sessions could be helping the female participants to not feel so overwhelmed by the topics discussed during the 10-minute disclosure period. However, as noted by Nolen-Hoeksema (1991), women have a tendency to ruminate more. Despite the time lapsed following the disclosure period, female participants could still be experiencing the negative effects of being vulnerable after disclosing their stressful life experience, thus the need for using their resiliency skills to help cope.

Although research has found that gender is a predictive factor of resilience (Bonnano et al., 2007), David (2001) conducted a study in whose conclusion indicated that gender was not a statistically significant factor. This study falls into the latter category in which the conclusion can be made that gender is not a predictive factor of resilience due to no statistical significance being found. In contrast to findings by Everly (2012), the results of the current study did not find PFA to increase resilience over time. Although this study found no statistically significant main or interaction effects among gender does not mean that PFA was ineffective, but rather are more likely due to the limitations faced within the study.

Limitations

There were several limitations that were identified in the study. First, the study was underpowered. Basically, the study did not gather data from the amount of subjects ($N = 50$) needed to have the necessary power exhibiting a moderate effect. The current study has $N = 41$, with only 26.8% of these being males. While the experimenter used an RCT to allot at random subjects to each condition, dividing males and females evenly between the two conditions was difficult. This is mostly due to the small number of males that chose to participate in the study compared to the large number of females. Second, the study used only participants from Andrews University Behavioral Sciences Research Participation Pool, which is not representative of the campus population. The participation pool consist of students who are taking certain Behavioral Sciences introductory courses (i.e., Introduction to Psychology, Principles of Sociology and Developmental Psychology). Third, all of these participants were asked to discuss a stressful life experience during the 10-minutes disclosure period. Because this experiment was not conducted immediately after a traumatic event, resilience scores measured after the disclosure period would not be truly representative of a population who just experienced

a traumatic event. The fourth limitation is that the RSES is a self-reported measure. The survey asked the subjects to report on how they felt at that precise moment, however, subjects could be under or over reporting how they were feeling.

Finally, the experimenter's gender may also be a limitation since the researcher was a female. According to Chapman et al. (2018), the interaction between the experimenter and the participant can be affected by a range of psychological and physical variables all due to gender. More specifically the experimenter in this study could be leading male participants to under or over report how they are feeling at the moment, because they feel the need to overcompensate to impress the experimenter. Thus, biases that are caused by the experimenter's gender must be taken into account because they could lead to the incorrect conclusion that the intervention method is either more successful or less successful than it actually is.

Implications

The increase in disasters occurring all over the world has placed high demand on DBH responders to assist individuals affected by the traumatic events. It has become important for individuals to learn to deal with uncertainty and cope with adversity. With the help of trauma responders trained in intervention methods such as PFA individuals affected by traumatic events are able to develop healthy coping strategies and maintain a healthy level of functioning.

Further research is needed in this area to advance our understanding of how the role of gender impacts resilience behaviors after experiencing stressful life events. Examining how the implementation of PFA affects resilience levels in males and females is important because research has found that gender is a predictive factor of resilience (Bonanno et al. 2007). In the past decade Day et al. (2016), notes that "a number of international funding mechanisms that have developed policies requiring sex and gender to be integrated in research proposals..." (p.

1). However, despite the awareness and recognition of the importance of conducting mental health research that implements gender consideration, the process towards this practice has not gained much action. In order to provide the best mental health care possible, it is important to integrate gender considerations in the intervention and treatment process. Again, the hope is that this study will set the foundation for subsequent research to find ways to implement gender-specific practices in the PFA intervention method that fosters resilience growth, but also implement such strategies in other interventions and treatments in order to provide more trauma related mental health practices.

References

- American Psychiatric Association. Committee on Civil Defense (1954) *Psychological first aid in community disasters*. Washington, DC.
- Bonanno, G.A. (2008). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *Psychological Trauma: Theory, Research, Practice, and Policy*, *5*(1), 101-113.
- Bonanno, G.A., Galea, S., Bucciarelli, A., & Vlahov, D. (2007). What predicts psychological resilience after disaster? The role of demographics, resources, and life stress. *Journal of Consulting and Clinical Psychology*, *75*(5), 671
- Bryant, R.A., Harvey, A.G. (2003). Gender differences in the relationship between acute stress disorder and posttraumatic stress disorder following motor vehicle accidents. *Australian and New Zealand Journal of Psychiatry*, *37*, 226-229.
- Brymer, M., Jacobs, A., Layne, C. Pynoos, R., Ruzek, J., Steinberg, A., Vernberg, E., & Watson, P. (2006). *Psychological first aid: Field operations guide* (2nd ed.). National Child Traumatic Stress Network and National Center for PTSD.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of personality and social psychology*, *56*(2), 267.
- Chapman, C. D., Benedict, C., & Schiöth, H. B. (2018). Experimenter gender and replicability in science. *Science Advances*, *4*(1), 1-7.
- David, D. (2011). Resilience as a protective factor against compassion fatigue in trauma therapists. Unpublished doctoral dissertation. Walden University: Minneapolis, MN.
- Day, S., Mason, R., Lajosky, S., & Rochon, P. A. (2016). Integrating and evaluating sex and gender in health research. *Health Research Policy and Systems*, *14*(75), 1-5.

- Everly, G. S. (2012). *Fostering human resilience: A primer on resilient leadership, psychological first aid, psychological body armor and critical incident stress management* (2nd ed.). MD: Chevron Publishing.
- Everly, G. S., Barnett, D. J., & Links, J. M. (2012). The Johns Hopkins model of psychological first aid (RAPID—PFA): Curriculum development and content validation. *International Journal of Emergency Mental Health, 14*(2), 95-103.
- Everly, G. S., & Flynn, B. W. (2006). Principles and practical procedures for acute psychological first aid training for personnel without mental health experience. *International Journal of Emergency Mental Health, 8*(2), 93-100.
- Everly, G. S., Lating, J. M., Sherman, M. F., & Goncher, I. (2016). The potential efficacy of psychological first aid on self-reported anxiety and mood: A pilot study. *Journal of Nervous and Mental Disease, 204*(3), 233-235.
- Everly, G.S., Welzant, V., & Jacobson, J.M. (2008). Resistance and resilience: the final frontier in traumatic stress management. *International Journal of Emergency Mental Health, 10*(4), 261-270.
- Galea, S., Nandi, A., & Vlahov, D. (2005). The epidemiology of post-traumatic stress disorder after disasters. *Epidemiologic Reviews, 27*(1), 78-91.
- Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and emotional problems. *Personality and Individual Differences, 30*(8), 1311-1327.
- Gortner, E. M., Rude, S. S., & Pennebaker, J. W. (2006). Benefits of expressive writing in lowering rumination and depressive symptoms. *Behavior Therapy, 37*(3), 292-303.

- Hirani, S., Lasiuk, G., & Hegadoren, K. (2016). The intersection of gender and resilience. *Journal of psychiatric and mental health nursing*, 23(6-7), 455-467.
- Johnson, D. C., Polusny, M. A., Erbes, C. R., King, D., King, L., Litz, B. T., Schnurr, P. P., Friedman, M., Pietrzak, R. H., Southwick, S. M., M. D. (2011). Development and initial validation of the response to stressful experiences scale. *Military Medicine*, 176(2), 161-169.
- Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology*, 100(4), 569.
- Seligman, M. E. (2011). Building resilience. *Harvard Business Review*, 89(4), 100-6.
- Shansky, R. M. (2015). Sex differences in PTSD resilience and susceptibility: Challenges for animal models of fear learning. *Neurobiology of Stress*, 1, 60-65.
- Stewart, A. J., & McDermott, C. (2004). Gender in psychology. *Annual Review of Psychology*, 55, 519-44.
- Sullivan, M. J., Bishop, S. R., & Pivik, J. (1995). The pain catastrophizing scale: development and validation. *Psychological Assessment*, 7(4), 524.
- Rutter, M.E. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, 57, 316-331.
- Wagnild, G., & Young, H. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement*, 1(2), 165-178.
- Waller, M. A. (2001). Resilience in Ecosystemic Context: Evolution of the Concept. *American Journal of Orthopsychiatry*, 71(3), 290-297.
- Werner, E., & Smith, R. (1982). *Vulnerable but invincible: A study of resilient children*. New York: McGraw-Hill.

Appendix A

Table A1.

Visual Representation of Procedure

Group	Baseline <i>Session 1</i>	Condition (Disclosure Period)	After Disclosure <i>Session 2</i>	Post 30-Minutes <i>Session 3</i>	Post 15-Days <i>Session 4</i>
1	Survey	PFA	Survey	Survey	Survey
2	Survey	Social Acknowledgment (control)	Survey	Survey	Survey

Note. Survey (Demographic Questionnaire & RSES).

Table A2

Within-Subjects Analysis of Variance Effects

Source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	partial η^2
Time*Condition	3	12.5	0.314	.815	0.015
Time*Sex	3	62.1	1.565	.207	0.069
Time*Condition*Sex	3	21.2	0.536	.660	0.025

Note. * $p < .01$ ** $p < .05$.

Table A3

Between-Subjects Analysis of Variance Effects

Source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	partial η^2
Condition	1	441.9	0.493	.490	0.023
Sex	1	1446.9	1.615	.218	0.071
Condition*Sex	1	79.9	0.089	.768	0.004

Note. * $p < .01$ ** $p < .05$.

Appendix B

Table B1

Mean RSES scores for males

	Session 1	Session 2	Session 3	Session 4
PFA	69.4	74.5	74.2	65.2
SA	67.0	61.8	68.2	70.0

Note. The 22-item RSES by Johnson et al. (2011) is scored in a positive direction on a 5-point Likert scale from 0 (“not at all like me”) to 4 (“exactly like me”). Resilience levels are as following: High = 88-71; Moderate = 70-50; and Low = 49-0.

Table B2

Mean RSES scores for females

	Session 1	Session 2	Session 3	Session 4
PFA	55.3	61.8	59.5	58.8
SA	57.7	57.2	58.2	56.9

Note. The 22-item RSES by Johnson et al. (2011) is scored in a positive direction on a 5-point Likert scale from 0 (“not at all like me”) to 4 (“exactly like me”). Resilience levels are as following: High = 88-71; Moderate = 70-50; and Low = 49-0.

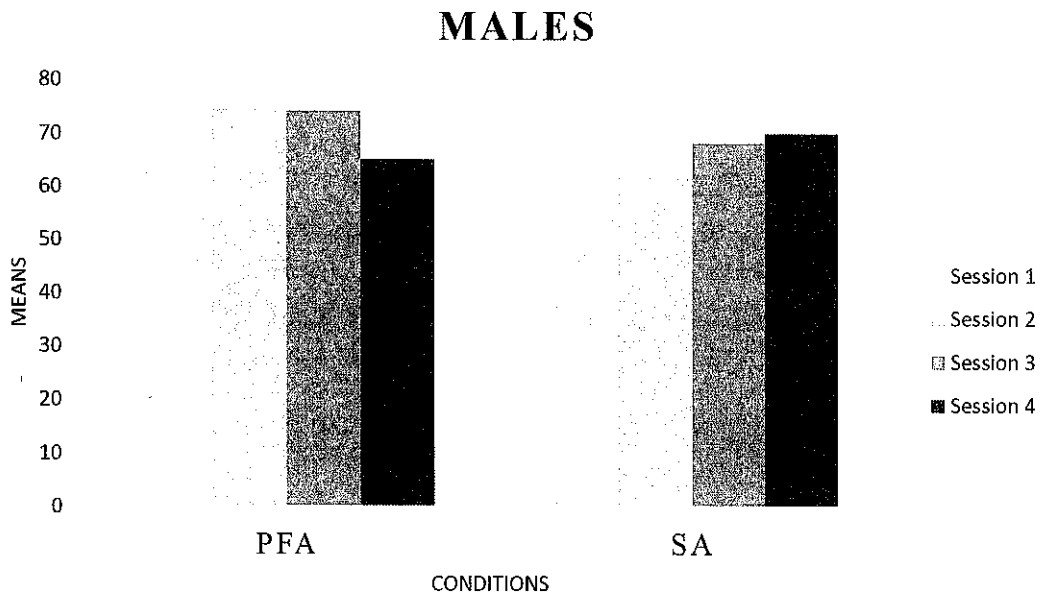


Figure B3. Graph of mean RSES scores for males.

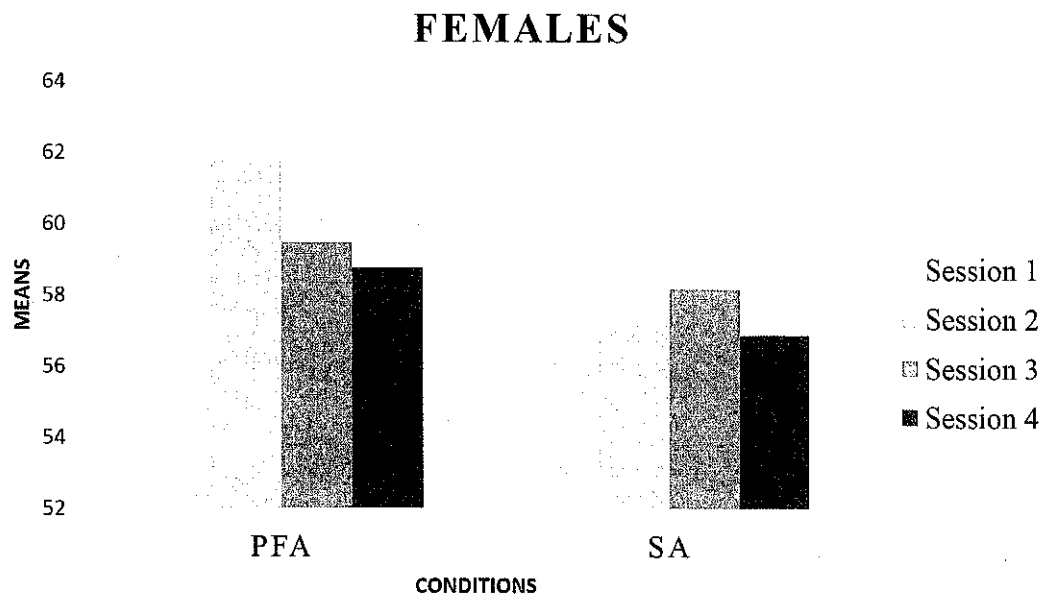


Figure B4. Graph of mean RSES scores for females.