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Life balance and traumatic txperiences in undergraduate students living near conflict zones

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Abstract

This study aimed to examine the prevalence of PTSD among undergraduate students and how PTSD affected life balance of undergraduate students who live close to conflict zones. The participants of the study were 253 undergraduate students who lived close to conflict zone and witnessed or experienced bombing or war conflicts. Data collection instruments were Juhnke-Balkin Life Balance Inventory- Turkish Form and Turkish Version of the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders Fifth Edition. The data were collected in paper-pencil format one month after bombing by terrorists across the border. Structural equation modeling was used in data analysis. The results indicated that PTSD symptomatology positively affects the students' depression and sleep disturbance levels. However, PTSD symptomatology negatively affects global health and positive orientation. All effect sizes were in small to large range. We suggest that administrators should invest counseling services and have practioners providing help especially for undergraduate students in conflict zones; and to make families familiar with PTSD symptoms.

Keywords Life balance · Conflict zones · Trauma · Post-traumatic stress disorder · Turkey

Wars are troublesome for people throughout the world and various numbers of researches investigated the long-term psychological effects of war-zone exposure. A proximate example is Syrian war which has influenced Syria herewith neighboring countries because wars have tremendous effects not only for people in war-zone, but also people who live near conflict zones. That is the conflict gets beyond the limits and makes the life difficult in a broad area. Regarding the fact that location matters in exposure to traumatic event (Khan et al. 2016), the neighbors of Syria including Turkey have been suffering due to the war. An explicit case is screened in the south part of Turkey, which has very close borders to Syria. Consequently, the profound effects of bombing can be detected in different cross borders of Turkey where it is possible to see and hear the signs of war; even it has not taken place in Turkey. Being exposed to traumatic experiences in conflict areas increases the vulnerability to have post-traumatic stress disorder (PTSD) and it creates emotional and behavioral problems as well as originates excessive thinking about traumatic event. While PTSD, a mental health problem, can arise after direct exposure to traumatic event, witnessing of trauma like disasters, war or terrorist attacks, accidents or assault poses a risk to have PTSD in any stage of life (Fu et al. 2013). According to American Psychiatric Association (2013), nearly 8.7% of general population has PTSD. Hence, war-zone stressors can be initiators of severe PTSD (Fontana et al. 1992; Yasan et al. 2008).

A great number of research indicated that exposure to traumatic events resulted in an increase of post-traumatic stress disorder (e.g. Aziz and Vostanis 1999; Şar 2017; Watson and Haynes 2007). Notwithstanding, the symptoms of PTSD emerges regardless of age (Aker et al. 2008). Even though the literature about the effects of war on children, adolescents or adults is ample in terms of traumatic experiences, undergraduate years are taking the attention of researchers studying PTSD (e.g. Anders et al. 2012; Khan et al. 2016; Marthoenis et al. 2018as youth are the investment for future. Undoubtedly,

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this period is a transition from being an adolescent to an adult in which emerging adults (18–25 ages including undergraduate students) strives to feel satisfied about future and increase well-being (Luecken and Gress 2010) with a sense of positive orientation. However, they might develop future anxiety about career, marriage or life in general when faced with a traumatic event (Arnett 2007; Poler Jr. 2010; Tuncer 2011; Şahin et al. 2011). For instance, Omaç Sönmez et al. (2017) stated that university students exposed to traumatic event had difficulty in concentration on their courses, having flashbacks and losing temper. According to Read et al. (2014), the rates of trauma exposure and PTSD were prevalent in college students and Frazier (2012) argued that most of undergraduates experience at least one potentially traumatic event during college years. Taking into account that the detrimental effects are risky for emerging adults, war conflicts might decrease the hope since PTSD developed in younger ages might cause long-term suffering in future. Similarly, regarding the experiences of war-zone, Rostami et al. (2009) categorized youth as "the real victims of the war" (p.36) and they found that they had anxiety problems, withdrawal from life, somatic difficulties, relationship problems with peers, problems related to thinking and paying attention, or behavioral problems.

Conflict zones are the places where uncertainty prevails and people find it difficult to make decisions (Rostami et al. 2009). People living in or close to conflict zones can feel under pressure, may have to make sudden decisions, have difficulties establishing relationships based on trust, and a low positive orientation (Rostami et al. 2009) resulting in the deterioration of life balance. Life balance is a complicated term which is defined as "satisfying time investment in different life areas" by Kuhnle, Hofer, and Kilian (2010, p.251) and "a process of feeling, perceiving, doing, being, and changing as part of life" (Karaman et al. 2018, p.141). Considering the concept as a whole, life balance can be associated with well-being and it is crucially important in younger ages (Kuhnle et al. 2010). Davis et al. (2014) argued that life balance has been composed of various factors including positive orientation, stress/anxiety, substance use/abuse, spiritual support, friendship, sleep disturbance, career, sex/intimacy, global health, and quality of relationships. Life balance is related to hope and optimism as well as positive orientation and global health which refer to the physical and mental health aspects including coping stress (Davis et al. 2014). In order to preserve life balance, people needs to be in harmony with their different life roles, such as school, work, family, social relations, etc. Besides, researchers (Christiansen and Matuska 2006; Davis et al. 2014; Karaman et al. 2018) argue that domains of life refer to the relationships, physical and psychological health, career, family life, daily activities, faith, and nutrition; and these domains can change based on time, place, and daily life conditions. As illustrated by Pacella et al. (2013), PTSD was associated with general physical health, that is, traumatic events can influence how people react to different life domains. At this point, it is important to know how traumatic events (bombings, conflicts, and life with refugees) affect multiple domains of life and daily activities so that prevention studies can be conducted for people in near conflict zones (Şar 2017).

Obviously, people near conflict zones have been affected psychologically and their life balance and general health has been under risk because the majority of studies indicated that prevalence rates of PTSD was related to risks factors in conflict areas (Yasan et al. 2008) and being exposure to trauma can lead to PTSD (Tomich and Tolich 2019). Previous literature shed light on the relationship between PTSD and sleep disturbance (Haynes et al. 2015; Krystal et al. 2016), depression (Belleville et al. 2011; Hughes et al. 2011), and suicidal ideations (Betts et al. 2013). The triggering effect of depression on PTSD influences college retention (Gerdes and Mallinckrodt 1994), which makes college years crucial in preserving life balance. In line with the profound literature, people in conflict areas like war-zones might have difficulty in having general health and life balance since life conditions have been restricted by various aspects of war.

The literature indicates that long-lasting psychological problems might occur as a result of exposure to war (Freh 2016) and life balance can be deteriorated. Fremont et al. (2005) stated that the effects of trauma can come to the surface either following the traumatic event or later as in the form of emotional reactions like anxiety, sleeping or behavioral problems. To illustrate, after a bomb event, 51.3% of students near the conflict reported to have PTSD and the symptoms continued even after six months and depression and anxiety level was high (Karakaya et al. 2006). The fact that trauma has harmful effects for people directly exposed to it does not mean that people witnessing traumatic event are not affected. Even though refugees have shown a high level of PTSD syndromes (Buchmüller et al. 2019), a study comparing behavioral and emotional problems of war-zone and refugee people found that people in war-zone experienced depression, somatic problems, disengagement problems and suffered attention more than refugees (Rostami et al. 2009).

University students or emerging adults who are exposed to signs and voices of bombs might develop PTSD just as people in war areas. If emerging adults have problems in general health setting and life balance due to traumatic events, it can lead to suffering and challenges in future life. Due to the fact that people with PTSD are vulnerable to silence, violence or passive in relationships (Nickerson et al. 2011), defining emerging adults with PTSD in near war-zone areas is crucial to reach a level of general well-being in future adults. However, while the studies about PTSD of veterans or refugees are generous, research about emerging adults in near war zone has been lacking in the literature. Considering the feeling

of strength, advancement and self-growth of refugees even after feeling the trauma (Rekhis and Popenoe 2018), comprehensive research about life balance and traumatic experiences of students gains importance to lead further studies to increase well-being after post-conflict situations.

In the light of inadequacy of research examining the direct and indirect effects of PTSD on life balance; and importance of traumatic experiences (bombings, conflicts, and life with refugees) of university students who might develop future anxiety, the purpose of the current study was to understand to what extent PTSD symptoms affected life balance of undergraduate students who lived close to conflict zones. In this context, the researchers examined the following question: What were the structural relations between the PTSD and life balance including global health, quality of relationships, positive orientation, depression, spiritual support, friendship/intimacy, and sleep disturbance among undergraduate students?

Method

Participants and Procedure

The data in the study were collected one month after the city was rescued from bombing by terrorists across the border. The measures were distributed and administered in April 2018 and the participants were approached after their weekly classes. Participation was voluntary and the procedure took about 25 min. Participants were 253 undergraduate students (60 male and 193 female) from border cities of south Anatolia in Turkey who witnessed and experienced conflicts between government forces and terrorist organizations (e.G. *ISIS*). One hundred and seventy one of participants (67.33%) witnessed when the border city was bombed by the terrorists, and others (32.67%) were 35 miles away from the border city. All participants reported that they observed and followed the news when military convoys passing through the border. The average age of participants was 21 ($SD = 1.82$). Participants reported their academic levels as freshmen ($n = 69$, 27%), sophomores ($n = 50$, 20%), juniors ($n = 122$, 48%), and seniors ($n = 12$, 5%).

Measures

Juhnke-Balkin Life Balance Inventory- Turkish Form (JBLI-TR) We used the JBLI-TR (Karaman et al. 2018) for the current study. Davis et al. (2014) developed the original JBLI to measure life balance components. This 54-item instrument consists of eight subscales evaluating global health, quality of relationships, positive orientation, depression, spiritual support, friendship/intimacy, career, and sleep disturbance. For the current study, all factors of JBLI-TR were used except the career factor. We did not include career factor because our sample included only students and most of them did not have a career or work experience.

The JBLI-TR uses a 5-point Likert-type response format with values ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The JBLI-TR includes items such as "I worry that stressful events in my life will result in unhealthy decisions or negatively affect my health" and "I would say that I am one of the physically healthiest persons in my age group." Karaman et al. (2018) reported the instrument did not have a total score because each factor's score was calculated separately and evaluated in itself. Karaman et al. (2018) reported moderate Cronbach's alpha coefficients between .77 (Sleep disturbance) and .81(Positive orientation). For the original version, Davis et al. (2014) reported alpha coefficients between .77 (Friendship) and .92 (Positive orientation). For the current study, we calculated a Cronbach's alpha ranging between .68 (Depression) and .77 (Friendship).

Turkish Version of the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (PCL-5-TR) The PCL-5-TR (Boysan et al. 2017) was used to measure PTSD symptomatology of participants. Weathers et al. (1993) developed and validated the first 17-item PTSD Checklist (PCL) based on Diagnostic and Statistical Manual of Mental Disorders (DSM) III-R criteria (American Psychiatric Association [APA], 1987). The final and current version of instrument (Blevins et al. 2015; Weathers et al. 2013) was expanded to 20 items within the changes of PTSD symptoms in DSM-5 (APA, 2013).

This 20-item instrument consists of four criteria assessing re-experiencing (B criteria), avoidance (C criteria), negative alterations (D criteria), and hyper-arousal (E criteria). The PCL-5-TR uses a 5-point Likert-type response format with values ranging from 0 = *not at all* to 4 = *extremely*. Two scores are used to discriminate individuals with PTSD symptoms. Boysan et al. (2017) run a ROC curve to determine cut-off scores for PTSD symptoms. The results indicate that a cut-off score of 47 is used for clinical use and 48 is used for community samples. In the current study, a cut-off score of 48 is used since participants were community sample. The PCL-5-TR includes items such as in the past month, how much were you bothered by: "Repeated, disturbing, and unwanted memories of the stressful experience?" and "Feeling jumpy or easily startled?" Boysan et al. (2017) reported a strong Cronbach's alpha coefficient of .94. For the original version, Blevins et al. (2015) reported an alpha coefficient of .94. For the current study, similar to the previous studies, we calculated a Cronbach's alpha of .94 as an indicator of strong consistency.

Data Analysis

First we checked the core assumptions of structural equation modeling; univariate outliers, univariate normality and

multivariate outliers. In our case, no data point had standardized z scores less than −2 or higher than 1.5, so we met the univariate outliers. No data point had skewness value less than −1 or higher than 1 and kurtosis value less than 1.5 or higher than 1, so we met the univariate normality assumption. Lastly, no data point had probability of mahalanobis distance less than .001 meaning that we met the multivariate outliers assumption. Thus, we did not remove any of the participants from the analysis.

Based on the existing literature, we first developed the structural equation model (SEM) given in Fig. 1. In the model, PTSD symptomatology, global health, quality of relationships, positive orientation, depression, spiritual support, friendship/intimacy, and sleep disturbance are latent variables and they are first measured via the measurement models (i.e., each latent variable is estimated by ordered factor indicators). PTSD symptomatology is an exogenous and the other seven are endogenous latent variables. We hypothesized effects from the PTSD and endogenous latent variables; that is, PTSD symptomology can affect global health, quality of relationships, positive orientation, depression, spiritual support, friendship/intimacy, and sleep disturbance of participants living near conflict zones. We also hypothesized that there should be meaningful associations between the endogenous latent variables. However, due to some problems in the hypothesized structure (e.g., insignificant paths), we had to modify the model by removing some of the endogenous variables. We call this new model selected structural model (see Fig. 2). We run both hypothesized and selected models in Mplus software version 6.12 (Muthen & Muthen, 1998–2012), and used weighted least square mean and variance (WLSMV) method as the estimation method as recommended (see Asparouhov and Muthén 2010). The bivariate correlations between the items for each of the scale in the selected model were given in supplementary tables.

Results

The correlations between PTSD and JBLI-TR subscales, subscale means, standard deviations and reliability scores are presented in Table 1. The correlations between observed scores of

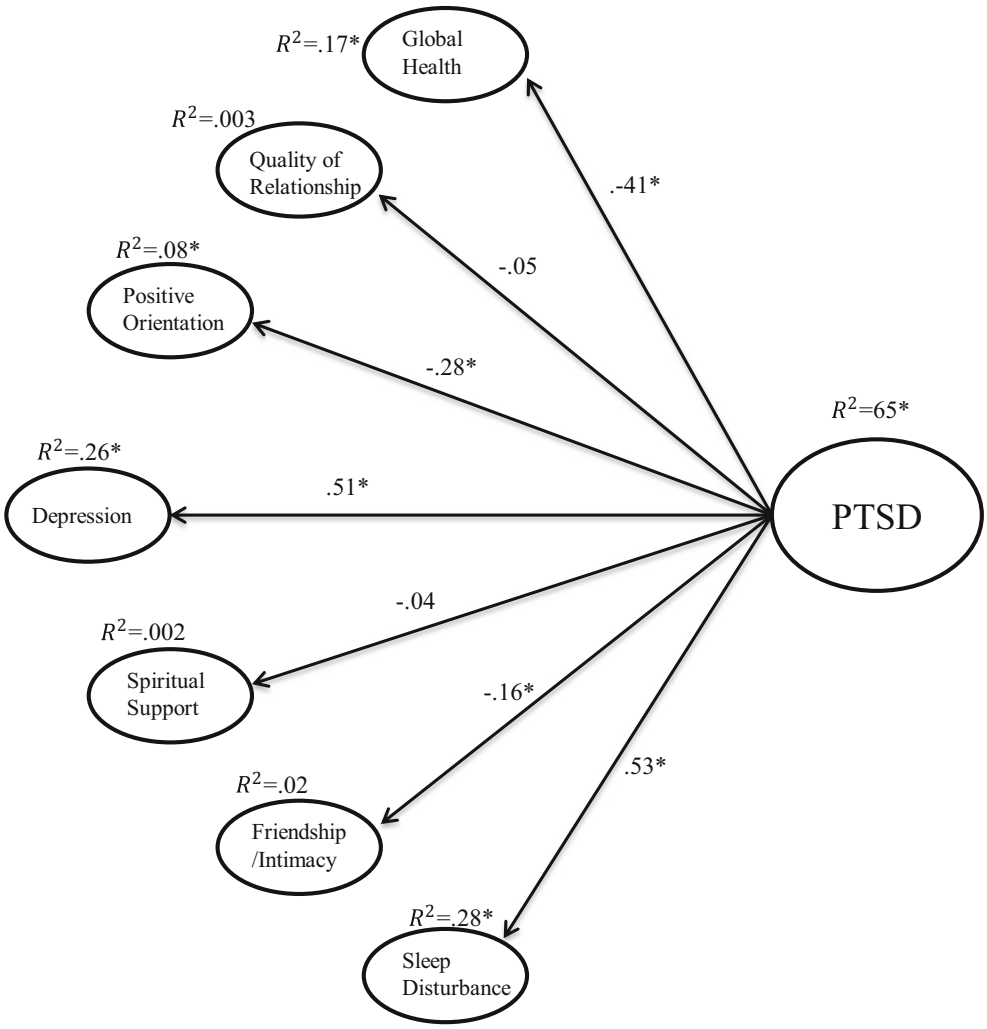

Fig. 1 Hypothesized structural model depicting the relations between PTSD and endogenous variables. *p <.05

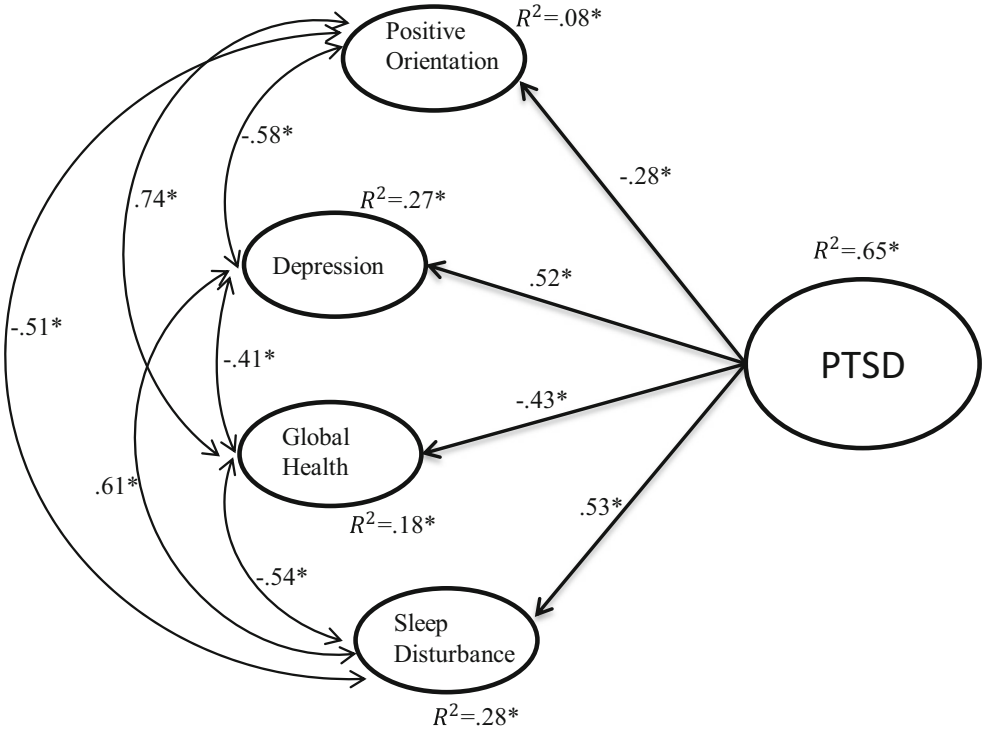

Fig. 2 Selected structural model depicting the relations between PTSD and endogenous variables. *p <.05

the variables were significant with a few exceptions, and Cronbach alpha statistics were ranged from .68 (Depression) to .95 (PCL-5). In addition, we found that 40% (n = 24, M = 59,43; SD = 10,13) of men and 40% (n = 79, M = 60,04; SD = 9,85) of women had highly critical PTSD symptoms based on the cut-off score of 48 or more (cut-off score for community samples; Boysan et al. 2017).

Hypothesized Structural Model

The fit indices of the hypothesized model were chi-square: χ^2 = (2249) = 3154.95 and p < .01, Comparative Fit Index (CFI) = .88, Tucker-Lewis index (TLI) = .88, Root Mean Square Error of Approximation (RMSEA) = .04 and Weighted Root Mean Square Residual (WRMR) = 1.29. The proportion of the explained variance for the PTSD was .65. Although, the fit indices of the hypothesized structural equation model was somewhat acceptable, the factor loadings of the measurement models were high, and we could improve the model with some modifications, the paths from PTSD symptomatology to the quality of relations, and spiritual support were insignificant (see Fig. 1). This means that in the hypothesized model, there were no meaningful affect from the PTSD symptomatology to the quality of relations and spiritual support. Furthermore, the amounts of explained variances (R^2) for these two endogenous latent variables were also insignificant (<.05). Although, the path from the PTSD symptomatology to friendship/intimacy was significant (β = −0.16, p = .01), the proportion of variance in friendship/

Table 1 Means, Standard Deviations, Reliability Coefficients, and Bivariate Correlations for Scores among Scales Used in the SEM (N = 253).

Variable	M	SD	α	1	2	3	4	5	7	8	9
1. Global Health	3.29	.62	.74	–	.18*	.59*	.32*	.50*	−.38*	−.41*	−.36*
2. Quality of Relationships	3.09	.85	.75		–	.23*	−.03	.28*	−.08	−.02	−.15**
3. Positive Orientation	3.32	.62	.74			–	.29*	.48*	−.41*	−.40*	−.27*
4. Spiritual Support	4.06	.73	.76				–	.33*	−.16**	−.16*	−.11
5. Friendship	3.85	.75	.77					–	−.17*	−.19*	−.23*
6. Depression	2.83	.72	.68						–	.50*	.49*
7. Sleep Disturbance	3.07	.81	.71							–	.48*
8. PCL-5	44.03	16.96	.95								–

*p < .01; **p < .05

intimacy that was associated with the PTSD symptomatology was insignificant ($R^2 = .02$, $p = .21 < .05$). This was more likely due to lower sample size, and could be improved with a larger sample. Therefore, we decided to remove the quality of relations, spiritual support and friendship/intimacy from the hypothesized structural model and re-run the model with the remaining four endogenous latent variables (e.g., depression, global health, sleep disturbance and positive orientation) and exogenous variable (see Fig. 2).

Selected Structural Model

The fit indices of the selected structural model were χ^2 (1214) = 1837.66 and $p < .01$, CFI = .91, Tucker-Lewis index (TLI) = .90, RMSEA = .04 and WRMR = 1.23. The goodness of fit indices of the selected structural model indicated adequate fit except for the chi-square. All standardized factor loadings for all measurement models were significant. All standardized factor loadings were above the historical cut-off value of .30 (Tabachnick and Fidell 2013), and ranged from .35 to .81. As in the hypothesized model, the proportion of the explained variance for the PTSD was .65. We found that the PTSD symptomatology explained 27% variance in depression ($\beta = .52$, $p < .001$), 18% variance in global health ($\beta = -.43$, $p < .001$), 8% variance in positive orientation ($\beta = -.28$, $p < .001$), 28% variance in sleep disturbance ($\beta = .53$, $p < .001$).

Discussion

The purpose of this study was to examine the prevalence of PTSD symptomology among undergraduate students and how PTSD affected life balance of undergraduate students who lived close to conflict zones. Our study was the first study conducted on undergraduate students' life balance and PTSD levels in the area where hosting big amount of refugees and conflicts happened between government forces and terrorist organizations (e.G. *ISIS*).

The results indicated that both men (40%) and women (40%) had high scores of PCL (a score more than 48) which was higher than PTSD symptoms rates among potentially traumatic events exposed undergraduate students in other studies (Anders et al. 2012; Frazier et al. 2009; Watson and Haynes 2007). In addition, when compared to the similar studies conducted on individuals and students who live in or near conflict zones (Fontana et al. 1992; Khan et al. 2016; Marthoenis et al. 2018; Şar 2017; Thabet and Abu Sultan 2016; Yasan et al. 2008), the symptomology rates were higher in the current study. There are some possible reasons of the high rate of prevalence. First, the students in the current study were exposed to the traumatic events (bombings, conflicts, and life with refugees) directly for last few years. Second, there is neither a counseling center in the university nor a private clinic in the city where students can apply for psychological help. The only way they can get help is psychiatrists and because of the high population (143.000 residents and over 50.000 refugees), the low number of psychiatrists ($n = 5$, based on the date article submitted), and stigma, it is not quite possible for students to get help.

The findings indicated that the PTSD symptomatology positively affected the students' depression level and sleep disturbance meaning that as the PTSD symptomatology level increased, depression and sleep disturbance level of people increased. The PTSD symptomatology negatively affected global health and positive orientation, meaning that as the PTSD symptomatology level increased, global health and positive orientation level of people decreased.

The results also showed that the effect of PTSD was the highest on the sleep disturbance and depression amongst the four variables, the lowest on the positive orientation. The findings of selected SEM indicated PTSD was a statistically significant contributor ($\beta = .52$, large effect size) to the depression, and explained 27% of the variance in depression. This finding is not surprising considering the literature on PTSD and depression (Haynes et al. 2015; Hughes et al. 2011; Kardaş and Tanhan 2018). However, previous research focused on the effect of depression on PTSD. Differently, looking from another perspective, trauma-exposed situations and PTSD can trigger depression based on the current study's finding. Interpreting the results of this situation, university students who have PTSD and live close to conflict zones can be under the risk of depression. Depression not only affects life balance and other components of life, such as less habitual daily activities and interactions with others (Haynes et al. 2005; Haynes et al. 2015), but also academic success (Eisenberg et al. 2009) and college retention (Gerdes and Mallinckrodt 1994). Furthermore, depression had significant and negative relationships with global health ($r = -.41$) and positive orientation ($r = -.58$), and a positive relationship with sleep disturbance ($r = .61$). In other words, high depression scores and low global health and positive orientation scores; and high depression and high sleep disturbance scores were related. Knowing the relationships between these life components may help students, administrators, researchers, families, and mental health practioners to understand the nature of life balance.

Another important finding was that PTSD was a statistically significant contributor ($\beta = .53$, large effect size) to the sleep disturbance, and explained 28% of the variance in sleep disturbance. This finding was parallel to the previous research (Belleville et al. 2009; Belleville et al. 2011; Marthoenis et al. 2018). However, based on the literature review and our best knowledge, the current study is the first study reporting effects of PTSD on sleep disturbance among undergraduate students who exposed to traumatic events. Symptoms of feeling tired often, difficulty falling asleep, feeling agitated when awaken from sleep, and often awaken at least once a night and having difficulty falling back to sleep are specific features characterizing

sleep disturbance among individuals with PTSD (APA 2013; Belleville et al. 2009; Davis et al. 2014). Sleep quality is an important component of life and has relationships with many factors. For example, many studies indicated that sleep loss or poor sleep quality was correlated with school and academic achievement (Wolfson and Carskadon 2003), learning capacity (Peigneux et al. 2001), and memory capacity and academic performance (Curcio et al. 2006; Pilcher and Huffcutt 1996) in different education levels (from school to university). Therefore, knowing the effects of PTSD on sleep can help mental health practioners and faculty members to understand better their clients and students.

Besides the effect of PTSD on depression and sleep disturbance, global health was another life balance factor explained by PCL. PTSD was a statistically significant contributor ($\beta = -.43$, medium effect size) to the global health, and explained 18% of the variance. Global health refers to the physical and mental health aspects. Global health is mostly related to healthy habits, one's satisfaction with his/her appearance, physical exercise, eating habits, coping with stress, balanced diet, and physical condition (Davis et al. 2014; Karaman et al. 2018). When individuals experience PTSD symptomologies, some deterioration in their health can be seen. Both the results of the current study and the literature supported this hypothesis. For instance, Mendlowicz and Stein (2000) stated that participants in their study reported decreased health-related quality of life after diagnosed with PTSD. In a meta-analytic review conducted by Pacella et al. (2013), results showed that PTSD were significantly related to general physical symptoms, general medical conditions, physical health-related quality of life, pain, gastrointestinal health, and cardiorespiratory health.

A last finding worth discussion involved that PTSD symptoms were a statistically significant contributor ($\beta = -.28$, small to medium effect size) to the positive orientation, and explained 8% of the variance in it. Positive orientation is in line with the aspects of happiness, optimism, future orientation, and positivity (Davis et al. 2014). This life balance concept stresses one's choices regarding life and future, fun activities, enjoyment, self-image, hope, feelings of emptiness, and optimism. The result indicated a negative effect of PTSD on positive orientation. When we compared the nature of positive orientation and PTSD symptomologies or diagnosing criterions, the results made sense. Schiraldi (2009) likens the condition of individuals with PTSD to the "Humpty Dumpty" nursery rhyme and states that they often report feeling:

- Shattered, broken, wounded, ripped, or torn apart
- Like they'll never get put back together
- Bruised to the soul, devastated, fallen apart, crushed
- Shut down, beaten down, beaten up
- Nothing seems sacred or special anymore
- As though they are in a deep black hole, damaged, ruined
- Different from everybody else
- As though they are losing their mind, going crazy, doomed
- Dead inside, "on the sidelines of life's games" (Schiraldi 2009, p. 4).

These are not only related to the positive orientation, but also to the global health and depression. When examined closely, these situations coincide with our findings. For example, individuals who feel "like they'll never get put back together" may have not optimism, hope, and enjoyment in the life. Taking into account being an undergraduate student who has future anxiety related to career (Poler Jr. 2010), starting a family (Tuncer 2011), and life goals (Şahin et al. 2011) can make the effect of PTSD on positive orientation more difficult. We also noticed that PTSD did not have an effect at all on the quality of relationships and spiritual support. In a review study, Chen and Koenig (2006) stressed that the association between traumatic stress and religion/spirituality was mixed and the direction of relationships varied between two. In the current study, one reason could be the nature of spiritual support subscale. For example, "I really do not have any spiritual or religious beliefs" and "My spiritual- religious beliefs bring me feelings of purpose" are two sample items of the scale. In a conceptual way, these items may not be associated with PTSD symptom. Therefore, PTSD may not affect participants' beliefs or levels of support they get from spirituality. The other variable, which PTSD did not affect, was quality of relationships. One reason could be the profile of participants. This study consisted of undergraduate students only rather than people from all age groups; and quality of relationships are highly related to marriage and a relationship with significant other (a partner). Our study's participants did not consist of enough participants to provide this criterion.

The current study informs administrators, mental health practioners, researchers, faculty members, and families about the effects of PTSD on life balance components among undergraduate students who live in or close to conflict zones. Psychological distraction and trauma caused by terror and war has become a part of everyday life. There are parts of conflicts, wars, and tensions in different regions of world. This gives people a sense of not having a safe place in the world. Undoubtedly, conflicts, terror, and war are even more worrying undergraduate students (the younger generation) who are concerned about the future. Therefore, we highly suggest to administrators investing counseling services and mental health practioners in conflict zones and war areas to help students. In addition, helping families to understand and be familiar with PTSD symptoms can be beneficial and support the treatment. Finally, strategies and treatments which focus on life balance and cognitive restructuring can be efficient to manage PTSD symptoms for undergraduate students near conflict zones.

Limitations of the current study include the use of one institution's students who experienced conflict between armed forces

and terrorists and witnessed bombardment of the city by the terrorists. There was one more city in the same situation where is almost 100 miles away from the study conducted. However, we could not include any participants from there because of safety and funding reasons. Another limitation was the diagnosing process of participants. The participants, both male and female had PTSD rates of 40% based on the PCL-TR. One should know that PCL is a screening instrument to offer a potential diagnosis. Extra instruments (e.g. CAPS) and interview techniques are needed to make a full diagnosis. One more limitation of this study was that we were able to use convenient sampling method due to availability of the participants. The city where the study was conducted was a very small university town, and there were limited number of undergraduate students. Among those students, many of them already left the city due to rocket attacks and so, we were able to conduct the study with the available participants only. Therefore, we were not able to control some of the possible confounding variables such as trauma history of the participants, number of traumatic experiences, and the duration of exposure to war-related traumas. Further studies can explore the effects of those variables on trauma. A further study can be conducted with higher sample size, and this would also allow us to find better structural relations between friendship/ intimacy and PTSD. The last limitation of this study was that we hypothesized one-sided relations between trauma and other variables meaning that, for instance, trauma had effects on depression, positive orientation etc. However, it is possible to have bi-directional relations between the endogenous variables and trauma. This means that, for instance, while trauma had effects on depression, depression could also have effects on trauma. Further studies can explore bi-directional relations between PTSD and other variables.

Compliance with Ethical Standards

Conflict of Interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Ethical Approval All procedures performed in studies were approved by Kilis 7 Aralık University's Ethics Committee.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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