



Traumatic Events, Post-Traumatic Stress Disorder, and Post-Traumatic Growth among University Students in Kabul City

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Abstract: Although trauma and PTSD are relatively common in Afghanistan, not everyone who is exposed to such events goes on to develop PTSD. In actuality, some people demonstrate resilience and experience positive psychological transformation, a phenomenon known as post-traumatic growth. This research focused on exploring how traumatic experiences and PTSD symptoms are structurally linked to PTG in university students. A total of 250 students participated in the study using the snowball sampling method. The Traumatic Experience Checklist, PCL-5, and PTGI questionnaires, with acceptable reliability, were used to collect the data. The data was analyzed using SPSS-24. The results indicate that most participants went through multiple traumatic events, and more than half (61.2%) of the participants personally experienced a natural disaster, 29.3% were witnesses to traffic accidents, and 33.6% heard about an assault with a weapon. The prevalence of PTSD symptoms was 48.8% and 35.6% of participants reported experiencing moderate to high degrees of PTG. Furthermore, the results showed that traumatic experiences and symptoms of PTSD directly influence and significantly predict PTG. It can be concluded that the experience of traumatic events and PTSD may lead to a positive change. These results can guide future research to examine the mechanisms and moderating factors, such as resilience, social support, and coping strategies, that influence this relationship. Interventions can be designed not only to treat PTSD but also to nurture PTG by incorporating trauma-informed and strength-based approaches.

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INTRODUCTION

All human beings face traumatic events, which is a common experience (Taku et al., 2009). However, overwhelming experiences can have negative psychological consequences (Murad & Aziz, 2017). A traumatic event is a distressing experience that poses a threat and can significantly affect the individual going through it, especially when it is profoundly unsettling

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and temporarily exceeds the person's ability to cope (López-Martínez, 2016). Trauma takes many forms, and the most commonly reported include losing a loved one, witnessing violence directed at others, and experiencing interpersonal trauma (Stein et al., 2010). The frequency, intensity, and nature of traumatic events differ significantly across geographical locations and among individuals. Research indicates that the majority of people are likely to encounter at least one potentially traumatic experience during their lifetime (Klein & Alexander, 2009).

Exposure to trauma is frequently associated with the development of psychological disorders, particularly PTSD and various mood disorders (Andersen & Silver, 2020). Three groups of symptoms typically define PTSD: arousal, avoidance, and re-experiencing of trauma through distressing memories, recurring dreams, or nightmares. The symptoms of this disorder usually appear during the first three months after the traumatic event; in some cases, they may emerge much later (Shalev, 2001).

Due to decades of continuous war and widespread poverty, the Afghan population is at a higher risk of encountering several stressful incidents throughout their lives (Masfety et al., 2021). A 2018 survey conducted by the European Union revealed that, on average, individuals in Afghanistan have experienced four traumatic events. Additionally, a national survey by Masfety et al. (2021) reported that a significant percentage of Afghans (64.67%) had firsthand experience with at least one traumatic incident, regardless of whether they had also witnessed someone else's trauma. The most commonly reported types of traumatic events included assault using a weapon, physical assault, and an encounter in a conflict area.

Research shows that a considerable portion of the Afghan population suffers from various psychological disorders, especially PTSD. A nationwide study by Masfety et al. (2021) revealed that the 12-month prevalence of PTSD among those who had gone through traumatic experiences was 5.34%, with a greater proportion among women than men. Although women were less than half as likely as men to experience traumatic events overall, sexual violence was a notable exception. Findings from other studies conducted in Afghanistan on different population groups also highlighted the high prevalence of PTSD symptoms (Shin et al., 2009; Ahmadi et al., 2021).

Research findings indicate that university students are not immune to the severe effects of traumatic experiences. A study by Giaconia et al. (1995) on adolescents of university age found that 43% had experienced traumatic events, and 14.5% fulfilled the diagnostic requirements for PTSD. An investigation that was carried out on a sample of college students, Hu et al. (2023) reported a PTSD prevalence rate of 25%. Similarly, 12% of university students in Iraq exhibited symptoms of PTSD (Arafat et al. 2023). It is essential to remember that previous studies have not fully examined the impact of traumatic experiences on Afghans' mental health, particularly when it comes to undergraduates.

Evidence suggests that traumatic incidents can have detrimental mental and/or physical effects; however, this is not always the case. In some instances, traumatic experiences can result in positive outcomes, a condition called Post-Traumatic Growth (Morrill, 2008).. In

some instances, traumatic experiences can result in positive outcomes, a phenomenon known as Post-Traumatic Growth (PTG) (Morrill, 2008). Tedeschi and Calhoun (2004) describe PTG as "positive psychological transformation experienced as a consequence of the struggle with complicated life situations." According to PTG theory, individuals who face psychological difficulties following trauma may experience personal development as a consequence (Collier, 2016). PTG may manifest in several ways like a change in point of view (Yule, 1993), gaining a new self-awareness and new worldview (Collier, 2016), a sense of improved inner strength, (Antoni et al., 2001), the formation of new life goals, and the discovery of new opportunities (Donovan & Burke, 2022).

Shakespeare-Finch et al. (2013) categorized five key areas in which PTG may occur: a renewed gratitude for life by a shift in priorities, deeper and more valuable relationships, improved personal resilience, spiritual growth, and the realization of new possibilities. Individuals who positively reinterpret traumatic events tend to experience increased degrees of positive impact and are more likely to report greater growth. Bonanno (2003) noted that after the tragedy at the World Trade Center, some survivors reported greater social bonds with friends. Similarly, Bonanno (2003) found that 85% of cancer survivors reported at least one positive change from their traumatic experience. The relationship among traumatic events, post-traumatic growth, and PTSD has been explored in previous research, but findings remain inconsistent. Linley et al. (2008) found that positive changes resulting from traumatic experiences predicted fewer PTSD symptoms and other common psychological disorders. However, Linley and Joseph (2004) also emphasized that not everyone who experiences trauma undergoes post-traumatic growth; some individuals may not report any positive psychological changes.

Even though trauma exposure is prevalent every day in Afghanistan, there is still a dearth of empirical research on the connections between traumatic experiences, PTSD, and PTG, particularly among young people enrolled in higher education. Understanding this relationship is essential for developing effective mental health interventions that address PTSD symptoms while also promoting resilience and psychological growth. The current research seeks to fill this research gap by investigating how traumatic experiences among university students in Kabul relate to both PTSD symptoms and PTG.

RESEARCH METHOD

This cross-sectional study was conducted in Kabul City, the capital of Afghanistan. This design was chosen because to examine the links between variables. A total of 250 students from Kabul University participated in the study. Participants were recruited through snowball sampling by distributing invitations via social media platforms between May and August 2023. Recipients of the invitation were encouraged to participate voluntarily and to share the invitation with other university students they knew in Kabul City. The study's objectives, data collection procedures, and confidentiality measures were clearly explained to all participants in the research.

Data Collection Instruments

Demographic questionnaire: A structured questionnaire was developed to collect the necessary demographic data from the participants. It included questions about age, gender, place of residence, parents' income, and parents' level of education.

Traumatic Experiences Checklist: To assess the traumatic events experienced by participants, the authors developed a self-report checklist based on the Traumatic Life Events Questionnaire (Kubany et al., 2000) and the Gaza Traumatic Events Scale (Vostanis et al., 2008). The questionnaire was designed to take into account the kind of traumatic experiences that college students most frequently encounter. It consists of 12 items, each requiring a "yes" or "no" response. A wide range of likely traumatic events is covered by the items, including loss, violence, and disasters caused by nature. The checklist was reviewed and validated by three psychologists with experience working in university settings, as well as one language expert. The reliability of this questionnaire in the present investigation was determined to be high ($\alpha = 0.96$).

PTSD Checklist (PCL): The symptoms of PTSD in participants were evaluated by the Persian version of the PTSD Checklist, that is developed for civilians (PCL-C). The civilian version checklist includes 17 items that represent the main symptoms of PTSD, and the total score ranges from 17 to 85. Based on a 5-point Likert scale, participants circle the response that best describes how much each symptom has troubled them over the previous month, ranging from 1 (Not at All) to 5 (Extremely) (Weathers, Litz, Herman, Huska, & Keane, 1993). Across various groups, the PCL-C has demonstrated excellent convergent and discriminant validity, as well as high internal and test-retest reliability (Norman et al., 2011; Gudarzai, 2003). The reliability of this questionnaire in the present investigation was determined to be high ($\alpha = 0.93$).

Post-traumatic Growth Inventory (PTGI): Tedeschi and Calhoun (1996) created the PTGI to evaluate an individual's growth after encountering a traumatic event. The five primary areas of growth that the PTGI evaluates are the realization of new opportunities, improved interpersonal relationships, increased personal strength, spiritual transformation, and a deeper appreciation of life. The PTGI consists of 21 items, each designed on a Likert-type scale. Across various groups, including university students, this questionnaire has demonstrated good internal consistency, test-retest stability, and strong discriminant and convergent validity. The reliability of this questionnaire in the present investigation was determined to be high ($\alpha = 0.92$).

Data Analysis

SPSS 24 was used for data analysis. Means and standard deviations for continuous variables, as well as frequencies and percentages for categorical variables, were among the descriptive statistics computed. Path analysis was carried out to investigate the structural connection among traumatic life experiences, symptoms of PTSD, and post-traumatic growth. Variables

were tested for normality, and traumatic experiences and PTSD → PTG were entered into the path model, and the assumptions for it were checked.

FINDINGS

The participants of this study were 250 university students (147 boys and 103 girls) aged 18-30 years from five zones of Kabul city: the center of Kabul city (57.2%), north (8.4%), south (6.0%), east (4.8%), and west (23.5%). The majority (98.0%) of them were undergraduate students. 55.6% of the participants were from the social sciences field, and 44.4% were from the natural sciences field. Concerning participants' parents' income, 13.3% had less than 5,000 Afg, 24.3% had between 5,000 and 10,000 Afg, 19.3% had between 10,000 and 15,000 Afg, 9% had between 20,000 and 25,000 Afg, and 17.8% had more than 25,000 Afg in income. Moreover, 27.6% participants reported that their father had no job, 7.2% of them said that their father was labor, 13.6% mentioned their father works with the government, and 8.4% reported that their father had died. The majority (77.6%) of the participants were single, followed by those who were married (14.0%) and engaged (8.4%).

Table (1) shows the frequency and percentage of traumatic events that participants personally experienced, witnessed, and heard about. It shows that the majority of the participants experienced more than one traumatic event. More than half (61.2%) of the participants personally experienced a natural disaster, 34.4% experienced a traffic accident, and 29.3% witnessed traffic accidents, such as those involving motorcycles, bicycles, or cars. A significant number (34.0%) of participants reported experiencing physical assault, and 23.6% said that they heard about physical assault experienced by others. The percentage of hearing the news of sexual assault that happened to others was more (36.8%) than the percentage of experiencing it personally (6.4%) and being a witness to it (4.8%). More respondents (34.4%) said that they have lost their loved ones, and a smaller number of participants reported experiencing addiction to alcohol or drugs. A very high number (75.6%) reported experiencing economic problems.

Table 1. Experience of traumatic events among participants

	Events	Experienced it		Witnessed it		Heard about it		Does not apply	
		N	%	N	%	N	%	N	%
1	Natural disaster (earthquake, flood, snow drift)	153	61.2	59	23.6	62	24.8	9	3.6
2	Traffic accident (for example, accident with a motorcycle, accident with a bicycle, accident with a car ...)	86	34.4	73	29.3	55	22.0	55	22.0
3	Physical assault (being attacked, getting slapped, beating up, getting kicked ...)	85	34.0	54	21.6	59	23.6	70	28.0

4	Weapon-related assault (like: getting shot, threatened with a knife, bomb, and...)	38	15.2	43	17.2	84	33.6	99	39.6
5	Sexual assault (rape, at, forced to perform any type of sexual act)	16	6.4	12	4.8	92	36.8	136	54.4
6	Being caught in a war area	76	30.4	37	14.8	73	29.2	102	40.8
7	Life-threatening sickness or injury	52	22.8	43	17.2	66	26.4	104	41.6
8	Loss of a loved one (father, mother, sister, brother, wife, husband)	86	34.4	28	11.2	24	8.6	127	50.8
9	Captivity and imprisonment (kidnapped, war captive, imprisonment)	19	7.6	25	10.0	75	30.0	142	56.8
10	Addiction to alcohol and other drugs	16	6.4	24	9.6	64	25.6	151	60.4
11	Academic failure (failure in courses, getting fired ...)	76	30.4	29	11.6	42	16.8	117	46.8
12	Economic problems	189	75.6	39	15.6	28	11.2	27	10.8

One hundred twenty two (48.8%) respondents fulfilled the criteria for PTSD. Symptoms of PTSD were more common in women (60.2%) than in men (66, 44.9%). and difference was statistically significant ($\chi^2 = 5.671$, $p = 0.017$), (Table. 2).

Table 2: Prevalence of PTSD symptoms based on gender

Sex	PTSD	NO PTSD	Total
	n (%)	n (%)	
Male	66(44.9)	81(55.1)	147
Female	62(60.2)	41(39.8)	103
Total	122(48.8)	128(51.2)	250

The respondents' post-traumatic growth is displayed in Table 3. There was no significant difference in PTG experience by gender ($\chi^2 = 0.128$, $p > 0.001$), and 89 respondents (35.6%) experienced moderate to high degrees of PTG. Among the five factors of PTG improved relationship had higher mean ($M=12.07$, $S.D. = 5.40$) followed by new possibilities ($M= 9.32$, 6.79), personal strength ($M=7.43$, $S.D. =5.40$), appreciation for life ($M= 3.75$, $S.D.= 4.8$) and spiritual growth ($M=3.47$, $S.D. = 3.24$) respectively (Table. 4).

Table 3. Post-traumatic growth among participants

Sex	No or Low Growth	Moderate to High Growth	Total
	n (%)	n (%)	
Male	96(65.3)	51(34.7)	147
Female	65(63.1)	38(36.9)	103
Total	161(64.4)	89(35.6)	250

Table 4. Mean and Standard Deviation of Post-traumatic Growth

Post-traumatic growth	M	S.D
Personal strength	7.43	5.40
New Possibilities	9.32	6.79
Improved relationships	12.07	8.37
Spiritual Growth	3.47	3.24
Appreciation for life	3.75	4.28

To assess the connection among traumatic experience, PTSD, and PTG, a path analysis was conducted using simultaneous hierarchical multiple regression. In current research, each of the steps below is considered a separate model. This was done in three phases. In the first phase, traumatic events were entered into a regression model to predict PTG, and the beta coefficient was evaluated. The results are provided in Figure 1.

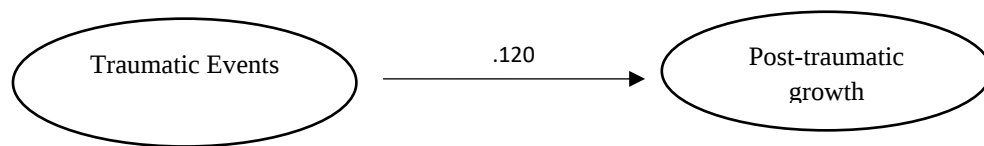


Figure 1. Result of regression analysis on prediction of Post-traumatic growth based on traumatic events (Beta Coefficients)

($R=0.120$, $R^2=0.014$, $Sig= 0.059$)

Figure 1 illustrates that the beta coefficient for traumatic events and PTG is significant and positive. This suggests that traumatic events have a positive association with PTG among university students. In the second phase, the predictive role of PTSD on PTG was examined, and the Beta coefficient was determined. The results in Figure 2 indicated that symptoms of PTSD positively and significantly predict PTG.

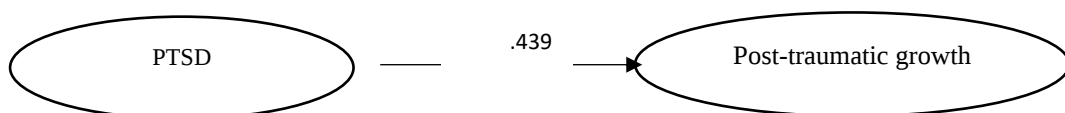


Figure 2. Result of regression analysis on prediction of PTG based on PTSD (Beta Coefficients)

($R=0.439$, $R^2=0.193$, $Sig= 0.000$)

In the third phase, the role of traumatic events and PTSD as predictors of PTG was assessed simultaneously, and the Beta Coefficient was estimated. As it is shown in Figure 3, both traumatic events and PTSD directly predict PTG. The relationship between traumatic events and symptoms of PTSD on PTG is provided in Tables 5 and 6.

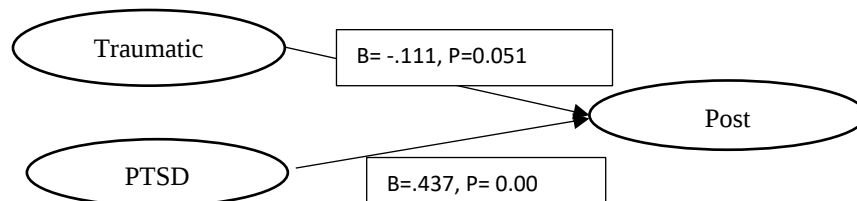


Figure 3. Path coefficients of the final research model (beta coefficients)

Table 5. Results of multiple regression analysis using a simultaneous hierarchical method

Phase	Variable	Beta	T	R	R ²	F	Df	Sig
Phase one	Traumatic events	.120	1.898	.120	.014	3.603	248	0.59
Phase two	PTSD	.439	7.693	.439	.193	59.177	248	.000
Phase four	Traumatic events	.111	1.962					.051
	PTSD	.437	7.698					.000

Table 6: Direct and Indirect Effects of Traumatic Life Events and PTSD on PTG

Predicting Variables	Direct Effect	PTG	Total
		Indirect effect	
Traumatic life events	.120		.059
PTSD	.439	-	.000

DISCUSSION

The current study was conducted among university students in Kabul City, involving a sample of 250 students enrolled in universities within the city. The findings of this research on assessing the experience of traumatic events show that a significant number of participants, 153 (61.2%), had experienced a natural disaster. Additionally, 85 participants (34.0%) said they have been the victim of physical violence, such as being kicked, hit, or attacked. The prevalence of sexual harassment (including rape attempt, rape, or being forced to engage in sexual acts through coercion or threats of harm) was found to be 6.4% among the participants.

A high percentage (38.8%) of respondents revealed that they have heard about others who were sexually assaulted. Additionally, 52 participants (22.8%) had experienced a life-threatening illness or injury, while 6.5% reported having experienced addiction. Academic failure was reported by 30.4% of the participants, and a high proportion of 188 students (75.6%) reported experiencing economic hardship. A substantial portion of students stated that they had gone through traumatic experiences at some point in their lives, with many indicating exposure to multiple such events. These results align with earlier research findings by Watson and Haynes (2007) and Frazier et al. (2009). This is not surprising, given that Afghanistan has been invaded several times by powerful countries (Saikal, 2018), endured prolonged internal conflicts (Collins, 2011), and faced numerous natural disasters (Oskorouchi and Sousa-Poza, 2021) (Qureshi, 2014). Therefore, it is considered a war-torn zone (Roy, 2012) and is one of the impoverished countries in the world. Different types of traumatic events occur daily in Afghanistan. As a result, experiencing trauma has become a standard part of Afghan people's daily lives. Consequently, approximately one in two Afghans experiences mental health distress. Moreover, one in five individuals face role impairment due to mental health issues (Sam et al., 2022). This group has a relatively high prevalence of anxiety, depression, and PTSD (Brick et al., 2014; Walt, 2022; Teismann et al., 2022).

The findings of current research show no significant differences in the experience of traumatic events based on gender, age, or place of residence. This suggests that traumatic events affect individuals regardless of their gender, age, place of residence, or income. This may be because most students living in Kabul City are exposed to similar risk factors both within their families and in the broader society.

A high percentage, 48.8% of the respondents in the current study, had symptoms of PTSD. This rate is noticeably higher than findings of other studies on university students in different countries, including 25% in Pakistan Kaysen et al. (2003), 22.9% in Iraq (Al-Shawi, Al-Hemairy et al., 2011), 11.4% in North Kivu (Muderhwa et al., 2022), and 16.5% in the United States (Vujanovic et al., 2020).

This finding is noteworthy, as it indicates that a significant number of university students—the future leaders and professionals of the country—are struggling with mental health challenges instead of focusing on developing their knowledge and skills. The high prevalence of PTSD symptoms is likely due to exposure to various traumatic events, including prolonged war, lack of social support and safety, and experiences of violence at home, school, and within the community. The role of culture may not be ignored in promoting violence and using harsh methods against one another, which in turn could lead to PTSD. It also found that symptoms of PTSD were lower in males (44.9%) than in females (60.2%). The difference was also significant in the scores for male participants ($M = 29.96$, $SD = 17.12$) and female participants ($M = 39.95$, $SD = 18.30$); $t(248) = -4.354$, $p = 0.000$. This finding aligns with the results of earlier studies involving college students (Cusack et al., 2018; Nooner et al., 2012; Ng et al., 2020). Previous studies have also highlighted the higher rate of psychological disorder symptoms, including PTSD, among Afghan women compared to men (Jewkes et al., 2018; Paiman et al., 2019; Tomlinson et al., 2020; Kovess-Masfety et al., 2021). It is because in Afghanistan, females are more frequently getting exposed to traumatic events, not only outside of their homes but inside their homes as well. Several factors, such as domestic violence, social isolation, unemployment, discrimination, and limitations in education, may contribute to the higher prevalence of PTSD symptoms in females.

The current research explored the PTG among the respondents, and 36% of them had moderate to high traumatic growth. A significant number of them who experienced traumatic experiences have shown PTG in every dimension of the PTG, and more growth is related to improved relationships and new possibilities. It could be due to living in a collectivist culture. The higher rate of post-traumatic growth among the participants could be due to cultural and social teachings. In Afghan culture, people are encouraged not to give up and fight against adversities. Religious beliefs also play a significant role in helping people deal with adversities (Vostanis et al., 2015). These findings align with earlier research conducted among university students in various countries. They also found evidence of post-traumatic growth among university students (Kroo & Nagi, 2011; Vostanis et al., 2015; Ai et al., 2007).

The purpose of this study was to explore the structure of the association between traumatic events, PTSD, and PTG among Kabul University students. To achieve this objective,

path analysis was conducted. The results showed that traumatic events have a direct effect on post-traumatic growth. This indicates that experiencing traumatic events could lead to PTG among university students. Though there is enough evidence that shows that traumatic events lead to PTSD and other problems (Masfety et al., 2021; Andersen & Silver, 2020; Giaconia et al., 1995), the results of the present study indicate that going through stressful experiences might also result in positive changes. However, it does not ignore the negative impact of traumatic events. Instead, it suggests that the experience of a traumatic event can have a negative impact, but it does not always lead to mental disorders such as PTSD. It can lead to positive growth. Variations in coping styles can influence whether trauma leads to negative or positive outcomes. These findings could be additional evidence to support the theory of PTG proposed by Tedeschi and Calhoun in 2004. This finding aligns with previous studies by Morrill (2008), Bonanno (2003), and Sungsil (2018), which suggest that positively interpreting traumatic events can lead to personal growth and positive change. In addition, the current study also revealed that symptoms of PTSD are linked to PTG.

The findings of this study suggest that the experience of PTSD symptoms may also lead to a positive change. Knowles et al. (2013) findings are similar to those of this study. They found that among undergraduates who had gone through various stressful and traumatic experiences, there was a positive correlation between symptoms of PTSD and PTG. Other studies also found that symptoms of PTSD may result to PTG (Butler et al., 2005; Maercker et al., 2008; Whealin et al., 2020; Liu, 2017; Barton et al., 2013). Again, the experience of post-traumatic growth may be linked to individual coping strategies for stress (Peters et al., 2021), including religious or spiritual coping and positive reframing (Prati & Pietrantonio, 2009; Schroevers & Teo, 2008). This may also be a reason for growth in this study, as the Afghan people are predominantly religious and hold strong beliefs in their religious teachings, offering prayers and reciting Dua regularly. The role of religion and cultural practices in PTG has to be investigated in future studies.

CONCLUSION

The current study's findings on the rate of experience of traumatic events and PTSD symptoms are noteworthy. However, the rate of post-traumatic growth is promising toward understanding the contributing factors and designing intervention plans based on it. As per findings of this study, in some cases, experience of traumatic events and PTSD symptoms may lead to positive growth, in which an individual may observe improvement in relationships, spiritual growth, see new possibilities, and appreciate their life. This study, which is done for the first time in Afghanistan, supports the theory of post-traumatic growth as a phenomenon that could be experienced in Asian culture, where the rate of experience of traumatic events and the number of people with PTSD symptoms is high. This finding can reassure clinicians that it is possible to change individual perceptions and evaluate events differently, thereby adopting positive cognitive emotion regulation strategies. The present research includes a few limitations. The sample does not accurately represent all university students in Kabul city,

nor those in Afghanistan. So the generalizability of research findings is crucial and should be considered carefully. Therefore, it is suggested that the relationship of traumatic events, symptoms of PTSD, and PTG should be explored among other populations as well.

Additionally, this study employed a cross-sectional design, relying solely on self-reports to collect the data. Future studies should employ a mixed-methods approach and a longitudinal design. It is also suggested that future research should focus on contributing factors to PTG and, based on that, psychologists design intervention plans to promote PTG.

Authors Contributions

- Bezhan Ayubi and Mohammad Jawad Mirzaee conceptualized the study
- Bezhan Ayubi and Khwaja Zabihullah Sediqi designed the study
- Bezhan Ayubi and Mohammad Jawad Mirzaee prepared the material for the study
- Mohammad Jawad Mirzaee and Khwaja Zabihullah Sediqi collected and processed the data
- Bezhan Ayubi and Khwaja Zabihullah Sediqi analysed and interpreted the data
- Bezhan Ayubi and Khwaja Zabihullah Sediqi reviewed the literature
- Bezhan Ayubi and Khwaja Zabihullah Sediqi wrote the first draft
- Bezhan Ayubi wrote the final draft

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Conflict of Interest

The author declares no conflict of interest.

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