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POSTTRAUMATIC GROWTH IN ADOLESCENTS EXPOSED TO TRAUMA: THE PREDICTIVE ROLE OF RESILIENCE AND SOCIAL SUPPORT

Magdalena Kobylarczyk-Kaczmarek and Nina Ogińska-Bulik

Department of Health Psychology, Institute of Psychology, University of Lodz

The aim of the study was to determine the links between resilience, social support and post-traumatic growth (PTG) in a group of teenagers aged 12–17 years (M = 14.65, SD = 1.28) who have experienced 4 types of traumatic events. The analyses were carried out, using the results obtained from 242 teenagers (1st measurement) and then the results of 175 respondents (2nd measurement). The analyses also included sociodemographic (age, gender) and situational variables (type of event and time since its occurrence). The study used the Personal Growth Questionnaire, the Resilience Measurement Scale, and the Social Support Scale. The results of the study indicated strong links between resilience and PTG, but only in the first measurement. Resilience also played the role of the main predictor of PTG. All analyzed types of support were positively associated with PTG (from 1st measurement) but turned out to weakly predict positive posttraumatic changes in the second one. In the occurrence of posttraumatic growth resilience plays a more important role than received social support.

Keywords: posttraumatic growth; resilience; social support; trauma; adolescents

MAGDALENA KOBYLARCZYK-KACZMAREK, https://orcid.org/0000-0002-7069-316X; NINA OGIŃSKA-BULIK, https://orcid.org/0000-0001-8868-407X. Correspondence concerning this article should be addressed to Magdalena Kobylarczyk-Kaczmarek, Instytut Psychologii UŁ, al. Rodziny Scheiblerów 2, 90-128 Łódź, Poland; e-mail: magdalena.kobylarczyk@now.uni.lodz.pl. The data and materials are available at https://osf.io/scygp/?view_only=799356f9cd4d4bab8c5f90e6fd535914.

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Posttraumatic Growth in Adolescents

Posttraumatic growth (PTG) is a phenomenon in which the individual experiences an improvement in functioning following a traumatic event. This concept was first introduced by Tedeschi and Calhoun (1996), who described PTG as the set of positive changes appearing after traumatic experiences, and which result from the subject's attempts to cope with the event. The PTG mechanism in children and adolescents after experiencing trauma is similar to that occurring in adults. In the occurrence of PTG, among others, such factors as individual traits, the undertaken coping activity and the received social support play an important role (Kobylarczyk-Kaczmarek & Ogińska-Bulik, 2023; Meyerson et al., 2011; Ogińska-Bulik, 2013a). However, minors seem to be more affected due to the demands placed on them by their age, developing personality, and changing cognitive patterns: the emergence of posttraumatic growth requires some kind of cognitive maturity, self-awareness, self-understanding, or self-reflection. It is also important to distinguish PTG from natural changes associated with maturation, as some of the changes that occur in young people, such as those involving philosophy of life or self-perception, may result from the implementation of various developmental tasks of adolescence, and not from the experienced trauma. Even so, comparative studies (Alisic et al., 2008; Taku et al., 2008) have shown that young people who have experienced a traumatic event show a higher level of positive change than those who have not.

In addition to the undertaken coping activities, post-traumatic growth models (Meyerson et al., 2011; Tedeschi et al., 2018), and previous research have highlighted the significant roles played by personal and social resources in PTG (Lu et al., 2022; Ogińska-Bulik, 2013a; Ulset & Soest, 2022).

The Relationship Between Resilience, Social Support and PTG

Coping with traumatic situations requires the individual to use many different personal and social resources. They can directly promote the occurrence of positive posttraumatic changes, but they can also affect the cognitive processing of trauma and determine the adoption of effective ways of coping with it, which in turn can favor the occurrence of PTG. Among the

resources believed to influence the development of PTG, resilience and social support are considered to play important roles.

The word "resilience" comes from Latin *salire*, meaning "to spring up" and *resilire* meaning "to bounce back" or "revert to a previous state" (Ogińska-Bulik & Juczyński, 2010). Masten et al. (2023) define it as the resilience of an individual child, which is observable at the behavioral level, depends on the operation and interaction of many other systems, both within the child (immune system, stress response system, etc.), in the relationships or resilience of the family, and in the broader socio-cultural and ecological systems in which the life and development of this child are embedded. This resilience to various difficult life situations is determined by an individual's properties, which make up the so-called resilient person (Ogińska-Bulik, 2013b).

Children with higher levels of resilience demonstrate greater competence in coping with stress and greater interpersonal skills, which facilitate the establishment and maintenance of warm and cordial relationships with others. They are also more insightful (Chuang et al., 2006). Some studies also indicate links between resilience and self-esteem (Ogińska-Bulik & Zadworna-Cieślak, 2014). A meta-analysis conducted by Ungar and Theron (2020) and Mesman et al. (2021) found that resilience is of great importance for mental health in children and adolescents, with a higher level being associated with fewer disorders.

There are few studies analyzing the relationship between resilience and posttraumatic growth in children and adolescents. In Polish studies of adolescents who experienced various types of negative life events, resilience was positively associated with posttraumatic growth (Ogińska-Bulik, 2012, 2013a; Ogińska-Bulik & Kobylarczyk, 2016); these findings have been confirmed elsewhere (Atay Turan et al., 2023; Li & Dai, 2017; Lu et al., 2022). In turn, a study of 2,908 adolescents exposed to terror found high levels of resilience to be associated with the lower post-traumatic growth scores (Levine et al., 2009).

Longitudinal research by Chen et al. (2022) indicated that high levels of resilience predict higher levels of PTG over time. It is likely that lower levels of resilience may lose their significance in the future. Moreover, results of Gu et al. (2023) showed that social support can predict increases in PTG during early treatment. The conducted studies indicate that the relationship between resilience and posttraumatic growth is diverse, which encourages further exploration in this area.

Another important resource that seems to play an important role in the occurrence of positive posttraumatic changes is social support. It is defined as a resource provided to a person through interactions with other people (Lakey & Cohen, 2000; Ogińska-Bulik & Juczyński, 2010; Sarason et al., 1983; Sęk & Cieślak, 2013). Social support can be treated as a general experience of social contacts and as an element of proactive coping (Cieślak & Eliasz, 2013; Heszen-Celińska & Sęk, 2020). Support is most often classified as a social resource and is defined as "objectively existing and available social networks that are distinguished by the fact that due to the existence of bonds, social contacts, and affiliation, they serve a helpful function for people in a difficult situation" (Sęk & Cieślak, 2013, p. 14).

Literature distinguished different types of support. Perceived support can be regarded as the effect of support networks and gaining experience in social relations. These comprise the knowledge and beliefs of a person about where and to whom they can turn for help. On the other hand, received support is the actual help afforded in a specific situation or time. It is characterized by an objective assessment or subjective account of the individual as the type and scope of help received at a given time (Heszen-Celińska & Sęk, 2020). In regard to children and adolescents, Kmiecik-Baran (2000) distinguished four types of received support: emotional, appraisal, instrumental, and informational.

Support can also be differentiated by the type of available support network. Natural sources of support are the closest people, such as a life partner, parents, siblings, friends, social groups, peer groups or teachers. They function spontaneously, are easily accessible and can be trusted. In contrast, formalized sources of support include professional groups, institutions and associations: these function according to specific principles or rules, are less spontaneous, and may be more difficult to access (Heszen-Celińska & Sęk, 2020).

The availability and perception of support in the environment of a person in a crisis may also be of significant importance for the occurrence of positive posttraumatic changes. This is indicated, among others, by the model of posttraumatic growth in children and adolescents proposed by Meyerson et al. (2011), whose findings suggest that social support is, alongside adaptive coping strategies, one of the two main factors leading to positive effects of trauma. Also, Kilmer et al. (2014), in their model of growth after trauma, draw attention to the importance of social support as a factor conducive to positive posttraumatic changes.

Social support has been found to be an important determinant of PTG, as evidenced by studies conducted on a group of adolescents struggling with cancer (Shand et al., 2015; Yuen et al., 2014), younger people experiencing earthquakes in Wenuchan and Yaan (Jia et al., 2017; Zhou & Wu, 2016; Zhou et al., 2016), children of parents affected by HIV/AIDS in rural China (Wei et al., 2016) or childhood cancer survivors (Atay Turan et al., 2023).

When analyzing the relationship between support and the occurrence of positive posttraumatic changes, it is important to consider the types of support and its sources. Emotional support seems to be of particular importance for such changes. Tedeschi and Calhoun (2007) emphasize that the possibility of expressing emotions, sharing feelings or revealing thoughts, especially immediately after the event experienced, helps to process the trauma, which may increase the likelihood of PTG.

To effectively cope with trauma, which is a prerequisite for the occurrence of PTG, the most important factor seems to be the help that an individual receives from those closest ones, although the results in this area are not unambiguous. Kimhi et al. (2010) report that support had a positive influence on growth among a group of children and adolescents, and that the source of support differentiated this relationship; support obtained from the family was significantly, albeit weakly, related to the level of posttraumatic growth. Also, Yu et al. (2010) report that support provided by teachers and peers was positively related to PTG. Similarly, Yaskowich (2003) showed that support obtained from teachers positively correlated with the intensity of growth changes. In addition, the results of the long-term study by Wolchik et al. (2008) indicate that support received from parents/guardians and other adults predicted posttraumatic growth in young people who had lost a parent in childhood.

In contrast, some studies suggest that no significant relationship exists between support and PTG. A weak relationship between social support and personal growth was indicated by the studies conducted among children and adolescents who had been victims of road accidents (Ogińska-Bulik & Kwarta, 2012). As such, the predictive mechanisms of social support obtained by minors for PTG still remain unclear and require further analysis.

The aim of the study was to determine whether personal and social resources, i.e. resilience and social support, are predictors of PTG. PTG was assessed at two time points, with the second measurement after six months. The study addressed the following questions: (1) What is the intensity of PTG symptoms in the studied group of younger people exposed to traumatic

situations? (2) Are the age and gender of the respondents, the type of event, and the time that has passed since its occurrence, as well as the type of psychological help received, associated with PTG symptoms? (3) Do the tested resources (resilience, support) act as predictors of PTG assessed at the first and second time point?

It was assumed that resilience and support will be positively associated with PTG, but stronger relationships will concern resilience. It was also assumed that the relationships between resilience and social support and PTG assessed after six months will be weaker than at the first time point.

METHOD

Participants

The study involved a group of adolescents aged 12–17 years (M = 14.65, SD = 1.28) who had experienced one of four traumatic events: a cancer diagnosis, an accident or injury, the death of a loved one, or harm/violence.

Procedure

At the first stage, 280 teenagers were examined, and the results of 242 were qualified for analysis due to some proportion of incompletely filled out questionnaires (119 boys [49.2%] and 123 girls [50.8%]). At the second stage, which concerned only the assessment of PTG, 175 people took part in the study. The results of 112 teenagers were qualified for analysis, which constituted 46.3% of the initial pool of examined people including 54 (48.2%) boys and 58 (51.8%) girls (the results of 63 were rejected due to missing data).

In terms of the type of trauma experienced, 59 people (24.4%) reported experiencing the death of a loved one, 61 (25.2%) reported a diagnosis of cancer, 61 (25.2%) mentioned violence, and 61 (25.2%) had been involved in a road accident. The majority of respondents declared that the traumatic event had taken place within the last 1–2 years (98 individuals, or 40.5%), within the last year (70, or 28.9%), within 2–3 years (47, or 19.4%), and the fewest number mentioned a period longer than 3 years (27, or 11.2%). Participants gave informed consent and patient anonymity was preserved.

Consent to conduct the research was obtained from the Bioethics Committee of the University of Lodz, Poland, resolution no. 23/KBBN-UŁ/I/2015.

Measures

The study used a survey developed for research purposes and three standard measurement tools: the Personal Growth Questionnaire, the Resilience Measurement Scale, and the Social Support Scale.

PTG was assessed using the Personal Growth Questionnaire, PGQ-27, developed by Ogińska-Bulik (2013b). It contains 27 statements regarding the occurrence of positive changes as a result of experiencing a negative life event. According to the instructions, the participants first mark the event that was the most taxing for them, the time that has passed since that event, and then assess the positive changes resulting from it, using a 4-point scale from 0 to 3. The conducted factor analysis revealed three factors: 1. Self-perception, 2. Appreciation of life, and 3. Relationships with others (all 9 items). The reliability of the questionnaire in the examined group is high, Cronbach's alpha for the entire scale is .97.

Resilience was assessed using the SPP-18, authored by Ogińska-Bulik and Juczyński (2011), which is intended for children and adolescents aged 12–19. The tool contains 18 statements, assessed on a 5-point scale. The higher the score, the greater the intensity of resilience. The SPP-18 makes it possible to determine the overall score and four factors that make up resilience, i.e. 1. optimistic attitude and energy, 2. perseverance and determination in action, 3. sense of humor and openness to new experiences, 4. personal competence and tolerance of negative affect. The tool is characterized by good psychometric properties. Its Cronbach's alpha coefficient is .82.

Support was measured using the Social Support Scale by Kmiecik-Baran (2000), which consists of 16 statements to which the examined person answers using a 4-point response scale (from 0 to 3). The scale is used to assess general social support, allowing to determine the level of general social support and its 4 types: emotional, appraisal, instrumental, informational. In addition, the types of support can be differentiated within 8 social groups: parents, siblings, other relatives, school friends, neighborhood friends, neighbors, teachers and strangers. The reliability of the test assessed using Cronbach's alpha coefficients for individual types of support reaches values from .56 to .79 (Kmiecik-Baran, 2000).

Data Analysis

Analyses were performed using SPSS version 27. Student's *t*-test and F test of one-way analysis of variance and post hoc tests (Tuckeys Test and Bonferroni Test) were used to determine differences between means. Pearson's *r* correlation coefficient was used to check the relationships between variables. A hierarchical regression analysis was utilized to check which variables play a predictive role in the positive effects of trauma exposure.

RESULTS

The means and standard deviations of the variables, and the correlation coefficients between them (with PTG assessed in the first measurement) are presented in Table 1.

The intensity of PTG among the examined teenagers was 44.70, which corresponds to a value of 5 sten, i.e. an intermediate result. This result does not differ from the normalization data obtained by Ogińska-Bulik (2013b) in studies of younger people, in which the mean score was 43.7 (SD = 18.26). Therefore, in accordance with the norms established for the PGQ-27, it can be indicated that 85 participants (35.1%) are characterized by a low level of positive change after trauma, 62 are at an intermediate level (25.6%), and 95 manifest a high level (39.3%).

The results of the conducted analyses indicate that age is associated with PTG (r = .42, p < .001), i.e. the tendency to notice positive posttraumatic changes increases with age. Gender differentiated the intensity of posttraumatic growth, but weakly (t = –2.33, p < .05, d = –2.99), with the girls demonstrating a higher level (M = 47.60, SD = 19.47) than the boys (M = 41.70, SD = 20.04).

Table 1

Correlation Coefficients, Means and Standard Deviations in the Youth Group

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 PTG	1														
2 Resilience	.72**	1													
3 Social support general	.45**	.38**	1												
4 Informational support	.35**	.27**	.94**	1											
5 Instrumental support	.47**	.35**	.96**	.89**	1										
6 Appraisal support	.55**	.50**	.91**	.77**	.87**	1									
7 Emotional support	.36**	.33**	.96**	.89**	.87**	.83**	1								
8 Parents	.02	–.04	.06	.07	.07	.07	.03	1							
9 Siblings	.14*	.01	.59**	.64**	.61**	.61**	.55**	.07	1						
10 Other relatives	.50**	.46**	.80**	.72**	.79**	.79**	.75**	–.09	.44**	1					
11 Friends from school	.48**	.41**	.84**	.76**	.81**	.81**	.78**	–.16*	.35**	.70**	1				
12 Friends from neighborhood	.19**	.19**	.68**	.61**	.63**	.63**	.66**	–.23**	.17**	.37**	.58**	1			
13 Neighbors	.31**	.29**	.77**	.70**	.69**	.69**	.78**	–.20**	.20**	.54*	.65**	.81**	1		
14 Teachers	.33**	.32**	.62**	.60**	.56**	.56**	.64**	.10	.13	.35**	.48**	.40**	.50**	1	
15 Stranger	.11	.20**	.41**	.33**	.35**	.35**	.43**	–.27**	–.05	.21**	.41**	.69**	.55**	.18**	1
M	44.70	40.45	192.31	50.68	47.14	42.13	52.35	39.24	32.52	26.02	22.48	16.78	17.19	24.81	13.26
± *SD*	±7.54	±13.53	±44.99	±11.73	±10.91	±11.25	±13.82	±7.73	±12.86	±13.43	±10.17	±8.04	±7.09	±8.79	±3.12

*$p < .05$, **$p < .01$.

The time that has passed since the experienced event also differentiates the intensity of positive change ($F = 6.39$, $p < .001$, $\eta^2_p = .08$). A higher level of positive posttraumatic changes was reported by adolescents who experienced a traumatic event within two to three years of the study ($M = 51.57$, $SD = 20.01$), and between one and two years later ($M = 47.75$, $SD = 20.16$). On the other hand, less intense PTG was observed in adolescents who experienced the event within one year ($M = 38.08$, $SD = 17.49$, $HSD = 9.67$, $p = .008$) or more than three years earlier ($M = 38.77$, $SD = 19.24$, $HSD = 13.49$, $p = .001$). In turn, the type of experienced traumatic event ($F = .24$, $p = .87$) and the type of received psychological help ($t = .12$, $p = .90$) did not differentiate the intensity of PTG.

The obtained correlation coefficients indicate that PTG 1 (when measured at the first time point) correlates strongly and positively with resilience, as well as with all types of support. Considering the sources of support, other relatives and friends from school had the most significant positive relationships with PTG, but siblings, neighborhood friends, neighbors and teachers also were substantial sources: PTG did not correlate only with support from parents and strangers. PTG 2 (after six months) did not show a significant relationship with resilience and turned out to be only weakly positively related to total support ($r = .15$, $p < .05$) and informational support ($r = .16$, $p < .05$).

The next step of the analysis used hierarchical regression to confirm whether the considered resources (resilience, support) act as predictors of PTG 1 and 2, i.e., those assessed at both the first and the second time point. Three separate analyses were conducted: the first aimed to determine potential predictors among the explanatory variables in the form of resilience and support in general (Table 2), the second examined resilience and types of support (Table 3), and the third concerned resilience and sources of support, i.e. support from siblings, other relatives, friends from school, neighborhood friends, neighbors and teachers (Table 4). The analysis also considered variables that were significantly associated with PTG, namely, age, gender and time elapsed since the experienced traumatic event.

Table 2

PTG 1 Predictors

PTG 1	Variables in the model	*B*	*SD*	β	*t*	*p*	Adjusted R^2
1	Resilience	1.06	0.07	.72	15.90	.000	.51
2	Resilience	0.94	0.07	.64	13.57	.000	
	Age	3.45	0.70	.22	4.90	.000	.55
3	Resilience	0.87	0.07	.59	12.67	.000	
	Age	2.98	0.70	.19	4.28	.000	
	Social support general	0.08	0.02	.18	3.86	.000	.58
4	Resilience	0.84	0.07	.57	12.44	.000	
	Age	3.22	0.68	.21	4.71	.000	
	Social support general	0.08	0.02	.19	4.19	.000	
	Gender	5.62	1.65	.14	3.41	.000	.60

Table 3

PTG 1 Predictors (Including Type of Support)

PTG 1	Variables in the model	*B*	*SD*	β	*t*	*p*	Adjusted R^2
1	Resilience	1.06	0.07	.72	15.90	.000	.51
2	Resilience	0.93	0.07	.63	13.84	.000	
	Instrumental support	0.45	0.08	.25	5.46	.000	.57
3	Resilience	0.85	0.07	.58	12.80	.000	
	Instrumental support	0.40	0.08	.22	4.96	.000	
	Age	2.96	0.68	.19	4.36	.000	.60
4	Resilience	0.83	0.07	.56	12.62	.000	
	Instrumental support	0.42	0.08	.23	5.28	.000	
	Age	3.21	0.67	.21	4.81	.000	
	Gender	5.61	1.62	.14	3.47	.001	.62
5	Resilience	0.83	0.06	.57	13.01	.000	
	Instrumental support	0.88	0.15	.48	5.93	.000	
	Age	3.39	0.65	.22	5.19	.000	
	Gender	5.75	1.58	.14	3.65	.000	
	Emotional support	–0.42	0.12	–.29	–3.64	.000	.63
6	Resilience	0.77	0.07	.52	11.17	.000	
	Instrumental support	0.66	0.17	.36	3.82	.000	
	Age	3.19	0.65	.21	4.90	.000	
	Gender	6.13	1.57	.15	3.91	.000	
	Emotional support	–0.51	0.12	–.35	–4.23	.000	
	Appraisal support	0.39	0.16	.22	2.43	.016	.64

Table 4

PTG 1 Predictors (Including Sources of Support)

PTG 1	Variables in the model	*B*	*SD*	β	*t*	*p*	Adjusted R^2
1	Resilience	1.06	0.07	.72	15.90	.000	.51
2	Resilience	.953	0.07	.65	14.29	.000	
	Age	3.45	0.70	.22	4.90	.000	.56
3	Resilience	0.84	0.07	.57	11.88	.000	
	Age	2.99	0.69	.19	4.32	.000	
	Support from other relatives	0.28	0.07	.19	3.94	.000	.58
4	Resilience	0.82	0.07	.56	11.74	.000	
	Age	3.24	0.69	.21	4.73	.000	
	Support from other relatives	0.28	0.07	.19	4.05	.000	
	Gender	5.18	1.65	.13	3.15	.002	.60
5	Resilience	0.80	0.07	.54	11.44	.000	
	Age	3.11	0.68	.20	4.56	.000	
	Support from other relatives	0.16	0.09	.10	1.76	.008	
	Gender	5.58	1.64	.14	3.40	.001	
	Support from friends from school	0.26	0.11	.13	2.30	.022	.61

The results of the first analysis indicate that resilience, social support, age and gender of the respondents are predictors of posttraumatic growth assessed in the first measurement. These variables explain a total of 60% of the variance of the dependent variable; among these, resilience has the greatest share in predicting PTG, explaining as much as 51% of the variance of the dependent variable. As a result, greater resilience is associated with a greater intensity of positive posttraumatic changes. Social support, as well as age and gender, only slightly predict positive posttraumatic changes in the studied group of teenagers.

The results of subsequent analyses indicate that for PTG 1, the predictive variables were resilience, age, gender, and three types of support (instrumental, emotional, and appraisal), which together explain 64% of the variance of the dependent variable. Among these, the strongest predictor is resilience, which explains as much as 51% of the dependent variable. Interestingly, some *B* indicators have opposite signs, which proves that older age, being female, instrumental and appraisal support favor the occurrence of PTG,

while emotional support seems to inhibit it. However, demographic data and individual types of support appear to have a negligible influence in predicting PTG for the analyzed group.

The final analysis identified five predictors for PTG (resilience, age, gender, and from school mates and other relatives), which together explain 61% of the variance of the dependent variable; as in the previous analyses, the strongest predictor was resilience (51%). The positive sign on the β index indicates that higher resilience, older age, being female, and greater support from relatives and school friends were associated with a greater intensity of positive posttraumatic changes. However, the remaining variables, apart from resilience, had a negligible impact on predicting PTG.

At the second measurement, none of the variables considered—resilience, types or sources of support—played a predictive role in PTG.

DISCUSSION

At the first measurement, posttraumatic growth (PTG) was strongly positively associated with resilience. These findings are partially consistent with those of other studies indicating that resilience is positively linked to positive posttraumatic changes (Atay Turan et al., 2023; Li & Dai, 2017; Lu et al., 2022; Ogińska-Bulik, 2012, 2013a; Ogińska-Bulik & Kobylarczyk, 2015). The importance of resilience in the occurrence of PTG in the studied group was confirmed by the regression analysis. It can therefore be assumed that among teenagers, those with greater resilience have a significantly greater chance of experiencing positive change after trauma than those with a low level.

However, no correlation between resilience and PTG was noted for the second measurement. Resilience also did not play a predictive role, indicating that the importance of this resource in encouraging positive posttraumatic changes decreases with time. Perhaps in the longer term, other personal resources, such as reflectiveness, life optimism or a sense of self-efficacy, may also become important for maintaining the positive consequences following the event.

Social support was positively associated with the occurrence of positive posttraumatic changes, which is consistent with the results of other studies conducted among trauma-exposed adolescents (Jia et al., 2017; Shand et al., 2015; Wei et al., 2016; Yuen et al., 2014; Zhou & Wu, 2016; Zhou et al.,

2016). PTG was associated with all types and some sources of support, primarily that from relatives and friends from school, but also from siblings, neighborhood friends, neighbors, and teachers.

However, social support turned out to be a significantly weaker predictor of PTG than resilience. This means that personal resources have a greater influence on the occurrence of positive posttraumatic changes than social resources. However, these results may have been influenced by the psychological help provided to teenagers exposed to trauma.

It is also worth noting that individual types of support have slightly different roles in the development of PTG, assessed at the first measurement. Informational support did not play a predictive role at all, instrumental and appraisal support turned out to be positive predictors of PTG, while emotional support was a negative predictor of positive posttraumatic changes. This last result may seem somewhat surprising, because on the one hand, correlation analysis showed a positive relationship between the variables, and on the other, this type of support is believed to be the primary promotor of the occurrence of PTG following experienced trauma. Tedeschi and Calhoun (2007) emphasize that the possibility of expressing emotions, sharing feelings, especially immediately after the experienced event, helps in working through trauma and may contribute to the occurrence of PTG. However, this may apply to adults, not teenagers. Moreover, studies have shown that emotional support promoted the occurrence of PTSD symptoms among adolescents exposed to trauma (Kobylarczyk-Kaczmarek & Ogińska-Bulik, 2023), which may confirm that such support has a more complex role to play. However, caution should be exercised in interpreting these results, as emotional support was found to poorly predict PTG in adolescents after traumatic experiences.

It should also be noted that, according to the obtained research results, support from parents does not have a significant influence on the occurrence of positive posttraumatic changes in the studied group. Moreover, it was also not associated with PTSD symptoms among adolescents exposed to trauma (Kobylarczyk-Kaczmarek & Ogińska-Bulik, 2023). This may indicate that other sources of support have a greater impact on the mental health of teenagers exposed to trauma.

The conducted research has certain limitations. The participant selection was purposeful, not random. The group included young people who had experienced selected types of traumatic events. Also, the analysis did not consider any other events the participants might have experienced, nor any situ-

ations in which several events had been experienced at the same time. Moreover, the study group was not very large, and all young people participating in the study were provided with psychological help in the form of support or psychological therapy/psychotherapy. Young people who did not receive such help were not included. Also, the study used self-reporting measurement tools, which could have influenced the results. The high correlation between resilience and PTG may partially stem from the fact that these constructs are similar to each other to some extent and may overlap.

Nevertheless, despite its limitations, the research contributes new content regarding the positive consequences of trauma exposure in younger people and their determinants. Most importantly, they confirm that resilience plays an important role in the occurrence of PTG. Considering the increasing number of adolescents exposed to trauma and their deteriorating mental health, it is vital to identify the factors that determine the occurrence of the positive consequences of experienced events and encourage their maintenance. Future directions of research should also include other subjective variables, such as coping strategies or ruminations, which may significantly determine the intensity of posttraumatic growth.

Our findings also have practical implications in that they can be used to create new preventive programs or enhance existing ones. They can also be used in crisis intervention and therapeutic work with young people after traumatic experiences, which should emphasize the developing and shaping, above all, resilience in young people exposed to trauma, but also increasing the need to use social support.

The results of our study indicate a significant role of resilience and a slightly smaller role of social support in the emergence of PTG in youth experiencing trauma, but in a shorter time after the event. The role of these factors decreases with time.

The results we obtained allowed us to formulate the following conclusions: (1) resilience and social support play a significant role in the occurrence of positive posttraumatic changes in adolescents exposed to trauma, but mainly in a shorter time after the experienced traumatic event; (2) the role of these resources for PTG decreases over time; (3) resilience is more important for posttraumatic growth than social support; (4) in adolescents exposed to trauma, it is necessary to develop and shape resources, especially resilience.

CRediT Author Statement

MAGDALENA KOBYLARCZYK-KACZMAREK (70%): conceptualization, methodology, software, validation, formal analysis, resources, writing (original draft), supervision, writing (review and editing).

NINA OGIŃSKA-BULIK (30%): conceptualization, methodology, writing (original draft).

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