

The predictive role of coping strategies in the occurrence and maintenance of negative and positive outcomes of trauma exposure in adolescents

Magdalena Kobylarczyk-Kaczmarek, Janina Ogińska-Bulik 

Department of Health Psychology, University of Lodz, Poland

Medical Studies 2026; 42 (1): 80–86

DOI: <https://doi.org/10.5114/ms.2026.160590>

Key words: trauma, posttraumatic stress disorder, posttraumatic growth, coping, adolescents.

Abstract

Introduction: The understanding of trauma is different in various publications and has changed over the years. It is worth knowing that “trauma” can be related to both the traumatic event itself and the reaction to such an event. Teenagers, like adults, are vulnerable to traumatic experiences. Exposure to trauma can have negative consequences, but it can also be a source of positive changes. Among the negative consequences of trauma, the most frequently mentioned in the literature is posttraumatic stress disorder, while among the positive ones is posttraumatic growth.

Aim of the research: The aim of the study was to determine which coping strategies play the role of predictors of posttraumatic stress disorder (PTSD) and posttraumatic growth (PTG) assessed at two time points (the second measurement after 6 months).

Material and methods: The analysis included results from 242 subjects aged 12–17 years ($M = 14.65$; $SD = 1.28$): 119 (49.2%) boys and 123 (50.8%) girls. The study used the Impact of Events Scale for Children and Adolescents – CRIES-13, the Personal Growth Questionnaire – PGQ-27, and the Coping Responses Inventory-Youth – CRI-48.

Results and conclusions: The strongest predictor for PTSD 1 and 2 is emotional discharge, and for PTG 1 logical analysis, and for PTG 2 emotional discharge. The obtained results indicate that both approach and avoidance strategies play an important role in the occurrence of negative and positive consequences of trauma exposure.

Introduction

Traumatic events are quite common in children and adolescents, with a prevalence ranging from 15% to 84% of the population [1, 2]. However, while exposure to trauma can have negative consequences, it can also be a source of positive changes. For example, while posttraumatic stress disorder (PTSD) often arises in response to trauma, being the most frequently mentioned negative consequence in the literature, trauma can also lead to posttraumatic growth (PTG).

Posttraumatic stress disorder is characterised by symptoms such as re-experiencing the traumatic event, avoidance, negative beliefs, and arousal [1]. The prevalence of such symptoms among minors can range from 0% to as much as 80–90%, depending on the population [3–5]. Symptoms of PTSD may persist but usually weaken over time [1].

In the case of children and adolescents, the positive changes may manifest as increased maturity, which may contribute to increased resilience and coping with future traumatic events. While it is believed that the mechanism of PTG in children is similar to that in adults [2, 6], this process seems to be more difficult due to age, personality development, and changing cognitive patterns.

The intensity of positive posttraumatic changes varies between individuals, but in most cases, it reaches an average level [1, 5, 7–9]. It is possible that the level of PTG may persist or increase over time, but few studies have been conducted in this area in relation to children and adolescents [5].

The role of coping strategies in the development of PTSD and PTG

The behavioural and cognitive activity of an individual have a considerable influence on the intensity of posttraumatic stress symptoms, as emphasised by the PTSD model [10]. The authors propose that after experiencing trauma, an individual will first try to cope with its consequences and control the threat using various available methods.

A similar tendency is observed in children and adolescents. However, it should be noted that in conditions of high stress, minors tend to use less effective coping strategies than adults. It has been found that with increasing stress intensity, adolescents are less likely to use active coping strategies, instead favouring avoidance strategies. However, the type of coping activity that may promote or protect against the negative psychological effects of trauma currently remains unclear [1, 11].

Exposure to trauma is also associated with the possibility of the occurrence of positive posttraumatic changes. Tedeschi *et al.* [12] showed that while PTG arises as a consequence of experienced trauma, it is not the trauma itself that contributes to the occurrence of growth, but rather the coping activity undertaken by those who have experienced it. The connection between the choice of methods employed for coping with trauma and the development of positive posttraumatic change is emphasised by PTG models developed for children and adolescents [1, 6]. The authors note that both problem-focused strategies (active coping, planning) and emotional avoidance strategies (positive reappraisal, acceptance) play important roles in the occurrence of positive posttraumatic changes. It should be emphasised, however, that relatively few studies have been conducted so far on the relationship between coping methods and posttraumatic growth among children and adolescents [13].

As studies on the effect of particular strategies on the occurrence of negative and positive consequences of trauma in young people have yielded ambiguous results, there is clearly a need for further research in this area. One particularly interesting direction concerns the role these strategies play in the consequences of experienced trauma, and their effect on changes in the intensity of PTSD and PTG over time.

Aim of the research

The aim of the study was to determine which coping strategies can act as predictors of PTSD and PTG when assessed at two time points: the first time following the event and the second 6 months later, in adolescents after traumatic experiences. It was assumed that avoidance-based strategies would be primarily positively associated with PTSD and negatively with PTG, while approach-based strategies would be primarily positively associated with PTG and negatively with PTSD. It was also assumed that the role of coping strategies in the occurrence of PTSD and PTG symptoms would decrease over time.

Material and methods

The group of study participants consisted of adolescents aged 12–17 years ($M = 14.65$; $SD = 1.28$) who experienced one of four traumatic events: diagnosis of cancer, accident or injury, death of a loved one, experience of harm/violence. 280 teenagers were examined in the first stage, but the results of 242 people were qualified for analysis (119, i.e. 49.2% of boys, and 123, i.e. 50.8% of girls), due to incompletely filled out questionnaires. A total of 175 people took part in the study in the second stage, but the results of 112 teenagers were qualified for analysis (the results of 63 were rejected due to missing data), which constituted 46.3% of the initial pool of subjects, includ-

ing 54 (48.2%) boys and 58 (51.8%) girls. Consent to conduct the research was obtained from the Bioethics Committee of the University of Lodz (Poland).

The study used a questionnaire and three standard measurement tools for this study, viz. the Children's Impact of Events Scale, the Personal Growth Questionnaire, and the Coping Response Inventory. The Children's Impact of Event Scale – CRIES-13, adapted to Polish conditions [14], was used to assess PTSD symptoms. The scale consists of 13 statements and allows for determining a general index of PTSD symptoms and three factors included in it, viz. intrusion, avoidance, and arousal. The cut-off value based on which one can conclude about the probability of PTSD occurrence is 30 points. The obtained values of Cronbach's α coefficients are satisfying (for the entire scale it was 0.95).

PTG was assessed using the Personal Growth Questionnaire – PGQ-27, developed by Ogińska-Bulik [15]. It contains 27 statements regarding the occurrence of positive changes because of experiencing a negative life event. Three factors were revealed: 1. Self-perception, 2. Appreciation of life, and 3. Relations with others. The reliability of the questionnaire is satisfying (Cronbach's α for the entire scale was 0.97).

The Coping Responses Inventory-Youth (CRI-48) developed by Moos [16], in the Polish adaptation by Szymańska [17], is used to assess the strategies of coping with stress in people aged 12–18 years. It contains 48 items, organised into 8 scales (6 items each). The first four: logical analysis, positive reappraisal, seeking guidance, and support problem solving are classified as strategies involving approaching the problem, and the next four: cognitive avoidance acceptance/resignation, seeking alternative rewards, and emotional discharge – as strategies involving avoidance. The tool has obtained satisfactory psychometric properties.

Results

The two measures of PTSD and PTG, i.e. 1 and 2 according to the time point, as well as their means, standard deviations, and correlation coefficients between variables, are presented in Tables 1 and 2.

Assuming a cut-off point of 30 points [14], the severity of PTSD symptoms in the studied group of adolescents was generally high, with a mean CRIES-13 score of 37.90. More precisely, 85 (35%) people presented a low level of PTSD symptoms (< 30 points), and 157 (65%) a high level (≥ 30 points).

The mean intensity of PTG among the examined teenagers was 44.70, which corresponds to a value of 5 Sten (intermediate result). This result does not differ from previous data obtained in a previous study of younger people following traumatic experiences, i.e. $M = 43.7$ ($SD = 18.26$) [15].

The obtained correlation coefficients indicate that PTSD at the first measurement of symptoms correlates

Table 1. Correlation coefficients, means, and standard deviations (first measurement of PTSD and PTG; $n = 242$)

Variables	1	2	3	4	5	6	7	8	9	10
1 PTSD 1	1									
2 PTG 1	0.01	1								
3 Logical analyses	0.38**	0.55**	1							
4 Positive reappraisal	-0.01	0.54**	0.67**	1						
5 Seeking guidance and support	0.10	0.37**	0.50**	0.63**	1					
6 Problem solving	-0.01	0.50**	0.53**	0.68**	0.63**	1				
7 Cognitive avoidance	0.30**	0.48**	0.70**	0.54**	0.47**	0.59**	1			
8 Acceptance or resignation	0.36**	0.48**	0.72**	0.53**	0.47**	0.50**	0.80**	1		
9 Seeking alternative rewards	0.28**	0.46**	0.59**	0.52**	0.44**	0.54**	0.65**	0.68**	1	
10 Emotional discharge	0.42**	0.34**	0.61**	0.32**	0.38**	0.36**	0.63**	0.70**	0.76**	1
M $\pm$ SD	37.90 $\pm$ 18.94	44.70 $\pm$ 7.54	9.10 $\pm$ 4.45	7.31 $\pm$ 3.76	7.69 $\pm$ 3.60	6.74 $\pm$ 3.85	9.57 $\pm$ 4.71	10.24 $\pm$ 4.83	9.20 $\pm$ 4.61	10.43 $\pm$ 4.11

M – mean, *SD* – standard deviation, * $p < 0.05$; ** $p < 0.01$.

Table 2. Correlation coefficients, means and standard deviations (second measurement of PTSD and PTG; $N = 112$)

Variables	1	2	3	4	5	6	7	8	9	10
1 PTSD 2	1									
2 PTG 2	0.32**	1								
3 Logical analyses	-0.15*	0.17*	1							
4 Positive reappraisal	-0.03	0.08	0.67**	1						
5 Seeking guidance and support	0.06	0.02	0.50**	0.63**	1					
6 Problem solving	-0.05	0.07	0.53**	0.68**	0.63**	1				
7 Cognitive avoidance	0.01	0.07	0.70**	0.54**	0.47**	0.59**	1			
8 Acceptance or resignation	-0.09	0.17*	0.72**	0.53**	0.47**	0.50**	0.80**	1		
9 Seeking alternative rewards	-0.19*	0.13	0.59**	0.52**	0.44**	0.54**	0.65**	0.68**	1	
10 Emotional discharge	-0.21**	0.29**	0.61**	0.32**	0.38**	0.36**	0.63**	0.70**	0.76**	1
M $\pm$ SD	14.55 $\pm$ 9.02	59.54 $\pm$ 16.95	9.10 $\pm$ 4.45	7.31 $\pm$ 3.76	7.69 $\pm$ 3.60	6.74 $\pm$ 3.85	9.57 $\pm$ 4.71	10.24 $\pm$ 4.83	9.20 $\pm$ 4.61	10.43 $\pm$ 4.11

M – mean, *SD* – standard deviation, * $p < 0.05$; ** $p < 0.01$.

positively with logical analysis, cognitive avoidance, acceptance/resignation, seeking alternative rewards, and emotional discharge, for which the highest correlation coefficient was recorded. In contrast, PTG at the first measurement strongly or moderately positively correlated with all analysed coping strategies and demonstrated higher correlation coefficients than for PTSD.

PTSD 2 correlates weakly with the coping strategies included in the study. Weak negative correlation coefficients were observed for logical analysis, seeking alternative rewards, and emotional discharge. In contrast, PTG 2 demonstrated weak positive correlations with emotional discharge, logical analysis, and acceptance/resignation.

The coping strategies that may act as predictors of PTSD and PTG were then identified by hierarchical regression. In the case of PTSD 1, seven explanatory variables were included, viz. all the coping strategies that correlated with the overall CRIES-13 score, viz. logical analysis, cognitive avoidance, acceptance/resignation, seeking alternative rewards, and emotional discharge, as well as time since the event and type of event. For PTSD 2 only logical analysis, seeking alternative rewards, and emotional discharge were included. For posttraumatic growth, 11 explanatory variables were considered for PTG 1, viz. all strategies, age and sex, and the time since the event, but only three for PTG 2, viz. the coping strategies logical analysis, acceptance/resignation, and emotional discharge (Table 3).

PTSD 1 is predicted by two coping strategies (emotional discharge and logical analysis) and the time that has passed since the experienced event; together, these three explain 24% of the variance of the dependent variable. The strongest positive predictor for PTSD 1 is emotional discharge, which explains 18% of the variance in PTSD. The other two variables make a significantly weaker contribution to the prediction of this variable.

In the case of PTG 1, four strategies proved to be predictive variables, viz. logical analysis, problem solving, positive reappraisal, and seeking alternative rewards, as well as age, sex, and time since the event, which explain 45% of the variance of PTG. Of these, the strongest predictor turned out to be logical analysis, which explains 30% of the variance; this relationship is also positive. The share of the remaining variables in the prediction of PTG is small.

At the second measurement, the only predictors turned out to be emotional discharge, both for PTSD, explaining 15%, and PTG, explaining 13%. It is worth noting that the Beta coefficient is negative for PTSD 2, i.e. this strategy reduces the symptoms of posttraumatic stress over time, but positive for PTG, i.e. it favours the occurrence of positive posttraumatic changes.

Discussion

Generally, a high level of PTSD was observed among the studied group of adolescents who had experienced one of four categories of traumatic events, viz. cancer, accident or injury, death of a loved one, or harm/violence. As many as 65% of the examined adolescents showed high intensity of posttraumatic stress symptoms, indicating a high probability of a diagnosis of PTSD. The obtained result is largely consistent with those of other studies conducted among adolescents [1, 3].

Our present findings indicate an intermediate intensity of positive changes, revealed in the form of posttraumatic growth. More specifically, 35% of the examined teenagers are characterised by a low level of positive changes after trauma, while slightly over 25% demonstrated an intermediate level and 39% a high level. The obtained results are consistent with the results of other studies [1, 8, 9, 16–18].

At the first measurement, our data indicate that such strategies as logical analysis, cognitive avoidance, acceptance/resignation, seeking alternative rewards, and emotional discharge are positively associated with the symptoms of PTSD. The remaining strategies were not associated with any intensification of PTSD. In conditions of high stress, the use of non-adaptive ways of coping by teenagers seems justified [1]. It remains unclear, however, why logical analysis, which is treated as a constructive (adaptive) strategy, appears to be positively related with the development of PTSD symptoms at the first measurement. It may be possible that engaging in cognitive processing of the experienced situations may be associated with intrusive rumination, which would increase the susceptibility to negative consequences in the form of PTSD symptoms.

At the second measurement, the use of seeking alternative rewards, emotional discharge, and logical analysis as coping strategies turned out to be negatively related to PTSD symptoms, although these relationships are much weaker.

The most significant predictor of PTSD, both in the first and second measurement, turned out to be emotional discharge. However, it should be noted that the Beta coefficient changed direction over time, indicating that the influence of this coping strategy on PTSD also changed. While emotional discharge seems to initially promote the occurrence of PTSD symptoms, it later seems to reduce their severity. Perhaps, by expressing negative emotions, the traumatised teenagers were able to reduce tension, look at the experienced problem more rationally, and “work through” it over time, thus contributing to a decrease in PTSD symptoms after 6 months.

Our findings indicate that both adaptive (approach-based) and avoidant coping strategies demonstrate significant positive relationships with PTG

Table 3. Predictors of PTSD and PTG in stages I and II

Variable	Variables in the model	B	SD	Beta	T	P-value	Corrected. R^2
PTSD 1							
1	Emotional discharge	1.95	0.27	0.42	7.24	0.000	0.18
2	Emotional discharge	2.00	0.27	0.43	7.55	0.000	
	Time since the event	−3.56	1.14	−0.18	−3.13	0.002	0.21
3	Emotional discharge	1.43	0.33	0.31	4.34	0.000	
	Time since the event	−3.79	1.12	−0.19	−3.37	0.000	
	Logical analyses	0.88	0.30	0.21	2.88	0.004	0.24
PTSD 2							
1	Emotional discharge	−0.44	0.20	−0.21	−2.19	0.031	0.15
PTG 1							
1	Logical analyses	2.47	0.24	0.55	10.25	0.000	0.30
2	Logical analyses	1.79	0.271	0.40	6.59	0.000	
	Problem solving	1.50	0.31	0.29	4.77	0.000	0.37
3	Logical analyses	1.53	0.28	0.34	5.55	0.000	
	Problem solving	1.29	0.31	0.25	4.11	0.000	
	Age	3.00	0.88	0.19	3.43	0.001	0.39
4	Logical analyses	1.45	0.27	0.32	5.30	0.000	
	Problem solving	1.30	0.31	0.25	4.20	0.000	
	Age	3.32	0.87	0.21	3.82	0.000	
	Gender	5.79	2.00	0.15	2.90	0.004	0.41
5	Logical analyses	1.11	0.31	0.25	3.59	0.000	
	Problem solving	0.88	0.36	0.17	2.48	0.014	
	Age	3.33	0.86	0.21	3.87	0.000	
	Gender	5.52	1.98	0.14	2.78	0.006	
	Positive reappraisal	0.95	0.41	0.18	2.32	0.021	0.43
6	Logical analyses	0.97	0.31	0.22	3.10	0.002	
	Problem solving	0.84	0.35	0.16	2.37	0.019	
	Age	4.51	1.00	0.29	4.49	0.000	
	Gender	5.78	1.97	0.15	2.93	0.004	
	Positive reappraisal	1.08	0.41	0.20	2.63	0.009	
	Time since the event	−2.71	1.22	−0.13	−2.22	0.027	0.44
7	Logical analyses	0.72	0.33	0.16	2.17	0.031	
	Problem solving	0.63	0.36	0.12	1.72	0.087	
	Age	4.61	1.00	0.30	4.62	0.000	
	Gender	6.05	1.96	0.15	3.09	0.002	
	Positive reappraisal	1.03	0.41	0.19	2.53	0.012	
	Time since the event	−2.72	1.21	−0.13	−2.25	0.025	
	Seeking alternative rewards	0.59	0.28	0.14	2.12	0.035	0.45
PTG 2							
1	Emotional discharge	1.14	0.37	0.29	30.12	0.002	0.13

B – unstandardised regression coefficient, SD – standard deviation, Beta – standardised regression coefficient, t – T-test, p – significance level.

assessed in the first measurement. Hence, many different ways of coping may foster the occurrence of positive changes in the short term. The main predictor of positive posttraumatic changes turned out to be logical analysis, i.e. cognitive attempts aimed at understanding the experienced traumatic situations, their analysis, and consideration of possible actions, are conducive to the occurrence of PTG. However, it should be noted that the predictive role of this strategy weakens with the passage of time.

At the second time point, 6 months later, three coping strategies, viz. logical analysis, acceptance/resignation, and emotional discharge, were found to have positive relationships with PTG; however, in this case, only emotional discharge played the role of a positive predictor. Hence, expressing negative emotions appears to favour the development of positive posttraumatic changes. It is unclear why coping strategies, especially approach-based ones, such as problem solving, logical analysis, seeking guidance and support or positive reappraisal, do not play a predictive role in maintaining positive posttraumatic changes. It may be due the fact that a decrease in PTSD symptoms is usually observed over time, and with this, a decrease in the coping activity of an individual and a reduced tendency to undertake active coping strategies.

In general, our results indicate that both approach and avoidance strategies play an essential role in the occurrence of negative and positive consequences of trauma exposure. This confirms the principles of the PTG model developed by Meyerson *et al.* [13], emphasising the role of both problem-focused and emotional-avoidant strategies in the occurrence of positive posttraumatic changes. Similarly, Wolchik *et al.* [13] also reported that active and avoidant coping strategies demonstrated positive relationships with PTG.

Our data indicates that the influence of a chosen coping strategy significantly decreases positive changes over time following the traumatic events. It should also be noted that during adolescence, young people are in a difficult period, in which their ways of coping with various situations are still being shaped. Teenagers experiencing intense stress are not always able to logically assess the difficulties they experience and react emotionally in an appropriate way.

The conducted research has certain limitations. The selection of respondents was purposeful, not random. The group included young people who had experienced a limited range of traumatic events: the study did not consider any other events that they may have experienced, nor situations in which several events had been experienced simultaneously. Moreover, the study group was not very large, and the measurement tools used were self-report, which could have influenced the obtained results.

Nevertheless, despite its limitations, the study contributes new content to our understanding of the role of coping strategies with the development of nega-

tive and positive consequences among adolescents exposed to trauma. This is particularly valuable considering the increasing numbers of younger people being exposed to trauma, and who are increasingly diagnosed with mental problems [19].

Our findings provide an insight into the complex relationships between the approach used by adolescents to cope with a traumatic event, and its negative and positive effects. In future studies, it would be worthwhile to consider the role of personal and social resources, which, on the one hand, may directly affect the intensity of PTSD and PTG symptoms, and on the other hand, may determine the choice of coping strategy and thus indirectly affect the negative and positive consequences of trauma exposure.

Funding

No external funding.

Ethical approval

Approval number: Bioethics Committee (Resolution No. 23/KBBN-UŁ/I/2015).

Conflict of interest

The authors declare no conflict of interest.

References

1. Kobylarczyk-Kaczmarek M, Ogińska-Bulik N. Trauma u młodzieży. Uwarunkowania i konsekwencje. [Trauma in Youth: Conditions and Consequences]. Difin 2023.
2. Ogińska-Bulik N. Pozytywne skutki doświadczeń traumatycznych, czyli kiedy łzy zamieniają się w perły. [The positive effects of traumatic experiences, when tears turn into pearls]. Difin, 2013.
3. Jin Y, Deng H, An J, Xu J. The prevalence of PTSD symptoms and depressive symptoms and related predictors in children and adolescents 3 years after the Ya'an earthquake. *Child Psychiatry Hum Dev.* 2019; 50(2): 300-307.
4. Maalouf FT, Haidar R, Mansour F, Elbejjani M, El Khoury J, Khoury B, Ghandour LA. Anxiety, depression and PTSD in children and adolescents following the Beirut port explosion. *J Affect Disord.* 2022; 302: 58-65.
5. Zhen R, Zhou X. Latent patterns of posttraumatic stress symptoms, depression, and posttraumatic growth among adolescents during the covid-19 pandemic. *J Traumatic Stress.* 2022; 35(1): 197-209.
6. Meyerson DA, Grant KE, Carter JS, Kilmer RP. Posttraumatic growth among children and adolescents: a systematic review. *Clin Psychol Rev.* 2011; 31(6): 949-964.
7. Harmon J, Venta A. Adolescent posttraumatic growth: a review. *Child Psychiatry Hum Dev.* 2021; 52(4): 596-608.
8. Tang W, Yan Z, Lu Y, Xu J. Prospective examination of adolescent emotional intelligence and post-traumatic growth during and after COVID-19 lockdown. *J Affect Disord.* 2022; 309: 368-374.
9. Xie Y, Wu J, Shen G. Posttraumatic growth in tibetan adolescent survivors 6 years after the 2010 yushu earthquake: depression and PTSD as predictors. *Child Psychiatry Hum Dev.* 2020; 51(1): 94-103.

10. Ehlers A, Clark DM. A cognitive model of posttraumatic stress disorder. *Behav Res Ther.* 2000; 38(4): 319-345.
11. Punamäki RL. Resiliency in conditions of war and military violence: preconditions and developmental processes. [In:] *Working with children and adolescents: an evidence-based approach to risk and resilience.* Garalda ME, Flament M (eds.). Lanham, MD: Jason Aronson Publishers 2006; 129-178.
12. Tedeschi RG, Shakespeare-Finch J, Taku K. *Posttraumatic growth: theory, research, and applications.* Routledge 2018.
13. Wolchik SA, Coxe S, Tein JY, Sandler IN, Ayers TS. Six-year longitudinal predictors of posttraumatic growth in parentally bereaved adolescents and young adults. *Omega (Westport).* 2009; 58(2): 107-128.
14. Ogińska-Bulik N, Kobylarczyk M. Skala Wpływu Zdarzeń dla Dzieci – SWZ-D-13 – polska adaptacja the Children's Impact of Event Scale – CRIES-13. [Polish adaptation of the Children's Impact of Event Scale – CRIES-13]. *Psychol Rev.* 2018; 61(2): 189-204.
15. Ogińska-Bulik N. Pozytywne skutki doświadczanych zdarzeń o charakterze traumatycznym u dzieci i młodzieży. Kwestionariusz Osobowego Wzrostu – KOW-27 (wersja D/M i R/O). [Positive effects of experienced traumatic events in children and adolescents. Personal Growth Questionnaire - KOW-27 (D/M and R/O versions)]. *Polish Psychological Forum.* 2013; 18(1): 93-111.
16. Moos RH. *CRI-Youth Form Professional Manual.* Psychological Assessment Resources, Inc. 1993.
17. Szymańska S. Rzetelność i trafność polskiego przekładu kwestionariusza Rudolfa H. Moosa: Coping Responses Inventory – youth form. [Reliability and validity of the Polish translation of the questionnaire by Rudolf H. Moos: Coping Responses Inventory – youth form]. *Acta Universitatis Lodzensis. Folia Psychol.* 1999; 3: 87-97.
18. Salter E, Stallard P. Posttraumatic growth in child survivors of a road traffic accident. *J Traum Stress.* 2004; 17(4): 335-340.
19. BRPD, Ogólnopolskie badanie jakości życia dzieci i młodzieży w Polsce [National survey on the quality of life of children and adolescents in Poland], 2022. online: <https://brpd.gov.pl/wp-content/uploads/2022/03/>

Address for correspondence

Magdalena Kobylarczyk-Kaczmarek
Department of Health Psychology
University of Lodz, Poland
E-mail: magdalena.kobylarczyk@now.uni.lodz.pl

Received: 22.10.2024

Accepted: 25.05.2025

Online publication: 30.03.2026