

The predictive role of cognitive trauma processing in the occurrence of secondary posttraumatic growth among professionals working with people after traumatic experiences

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Abstract

Objective: The aim of the study was to determine the relationship between cognitive trauma processing and secondary posttraumatic growth (SPTG) in professionals helping people after traumatic experiences.

Method: The study included 580 respondents exposed to indirect trauma. The analysis was conducted on 500 participants, mostly women (76.4%) representing five professional groups (therapists, medical rescuers, nursing staff, social workers and probation officers). The mean age of the participants was 44.09 years (SD=9.85). Data was collected using the Secondary Posttraumatic Growth Inventory (SPTGI), the Cognitive Processing of Trauma Scale (CPOTS) and a survey created for the study.

Results: SPTG (total SPTGI score) was positively related with four cognitive coping strategies: positive cognitive restructuring, resolution/acceptance, downward comparison and, to a lesser extent, with regret. SPTG was found to be positively correlated with cognitive restructuring and resolution/acceptance in all five groups of professionals. These two strategies appeared to be the main predictors of SPTG, although their contributions varied.

Discussion: Cognitive restructuring and resolution/acceptance were found to play a predictive role for SPTG, primarily among therapists and social workers. It is worth noting that in the group of social workers, cognitive restructuring was also a positive predictor of the negative effects of indirect exposure to trauma. This may suggest that this strategy may have a significant role in the occurrence of consequences of indirect exposure to trauma, regardless of whether they are negative or positive.

Conclusions: It is worth expanding the competences of professionals in dealing with trauma experienced by others, especially among social workers; particularly by encouraging greater use of positive coping strategies.

cognitive trauma processing; professionals working with people after traumatic experiences; secondary posttraumatic growth

INTRODUCTION

Secondary posttraumatic growth in professionals helping people after traumatic experiences

Through working with people who have experienced traumatic events, professionals are also exposed to the trauma, but indirectly, and demonstrate similar reactions as the victims themselves. Although these reactions are usually negative and are revealed in the form of secondary traumatic stress, professionals may also experience positive changes occurring in the form of vicarious or secondary posttraumatic growth (VPTG/SPTG).

SPTG is defined as the positive changes occurring as a result of vicarious traumatic exposure [1-3]. These changes, as in the case of PTG manifested by those who directly experience traumatic events, include changes in self-perception, relationships with others, and philosophy of life [4-5]. Calhoun and Tedeschi [3] assume that engaging in meaningful interaction with those who have experienced trauma may cause the professional to reconsider their values and beliefs, as well as their sense of meaningful connection with the world and other people. The authors describe SPTG as a process of confronting existential matters and spirituality, providing greater recognition for one's own life, enhancing concentration and deeper compassion towards others.

SPTG is also believed to result from bearing witness to the resilience and ability of the client to overcome adversity [6-7]. It indicates that witnessing positive changes in direct survivors who effectively cope with experienced trauma can trigger the same changes in others [6]. Professionals, often inspired by positive changes occurring in their clients, may increase their confidence in the world and in others, and strengthen their faith in the great remedial possibilities of people who have suffered harm.

Secondary positive post-traumatic change is also referred to as professional posttraumatic growth [8], compassion satisfaction [9] or vicarious resilience [10].

It is worth noting that despite their similarity to each other, SPTG and PTG are not identical. According to Arnold et al. [1] people experiencing SPTG reveal slightly greater overall resilience compared to those with PTG, but

slightly smaller changes in the sense of personal strength. There are also changes in the spiritual sphere; people helping trauma survivors report greater spiritual rumination, which is associated with the acceptance of spiritual beliefs and situations that cannot be changed, while people who directly experience traumatic events report personal growth in spirituality [1, 11]. Additionally, SPTG is related to increasing professional capabilities and competences or raising work awareness as values [12-14].

Secondary positive posttraumatic changes have been noted among various groups of professionals exposed to indirect trauma [11, 15-17]. However, it is worth emphasizing that people helping others usually display weaker positive consequences than the trauma survivors. This appears to be confirmed by comparative research. Lambert and Lawson [18] found that people affected by hurricanes showed significantly more intense posttraumatic growth than the professional and volunteer helpers who provided them assistance.

Some models have been prepared to explain the mechanism of secondary positive posttraumatic change. One is the model of posttraumatic growth (PTG), which was developed for people who have directly suffered traumatic events, and can also be used for those exposed to indirect trauma. According to the PTG model [3,4,19] trauma causes severe distress and violates cognitive patterns and beliefs. The experienced traumatic events present significant challenges for the individuals, and thus typically activate their cognitive processing of trauma. This processing forces the individuals to revise the assumptions about themselves and the world. By processing the trauma cognitively, the individuals try to gain sense and meaning from the experienced event and adapt to the new, changed reality.

An interesting model presenting the mechanism of secondary positive post-traumatic changes in professionals exposed to indirect trauma is the VPTG in trauma workers model, which was developed by Cohen and Colens [20]. This model also indicates that professionals working with trauma survivors demonstrate positive changes in their beliefs about the world and self, personal values and everyday life. The authors propose that the trauma experienced by the client acts as a shock to the help-

ers and presents a challenge to their cognitive beliefs. This leads the helpers to question their basic assumptions about the world, and forces them to attempt to understand the events experienced by the client and to give them sense and meaning. Such changes may result in the appearance of negative beliefs about the world and the individual, and the perpetuation of existing ones; however, they may also give rise to positive reactions characterized by positive posttraumatic changes, especially if the helper witnessed the growth of the trauma victim. In effect, the professionals working with people impacted by trauma, may display an increase in compassion, wisdom, self-awareness, self-esteem, self-confidence, greater value of life, assign greater importance to family and friends and develop greater resistance to traumatic events.

The relationship between cognitive trauma processing and secondary posttraumatic growth

The PTG model emphasizes the significance of cognitive trauma processing in the development of positive posttraumatic changes among people who directly experience trauma, mainly in the form of ruminations, which are also treated as coping strategies [3,4,19]. The VPTG in trauma workers model presented by Cohen and Collens [20] also emphasizes the role of coping activity, including cognitive coping strategies in the occurrence of positive posttraumatic changes. However, there are still few studies showing a link between SPTG and cognitive trauma processing, especially cognitive coping strategies.

A study of people helping trauma victims, including staff and volunteers from three domestic violence organizations and one sexual assault agency [21], found that SPTG (measured with the Psychological Well-Being – Posttraumatic Changes Questionnaire) positively correlated with such cognitive strategies as positive cognitive restructuring and resolution/acceptance and negatively with regret (measured with the Cognitive Processing of Trauma Scale – CPOTS).

A Polish study of female professionals working with victims of violence identified positive relationships between secondary positive posttraumatic changes and cognitive restructuring and resolution/acceptance, also measured with

CPOTS [22]. The study also showed that these two coping strategies mediate the relationship between empathy and SPTG.

The aim of the present study was to determine the prevalence of SPTG in professionals exposed to indirect trauma and identify its links with the cognitive processing of the trauma. The indicators of cognitive trauma processing were cognitive strategies for dealing with trauma suffered by their mentees. The research refers to the cognitive model of PTG [3,4,19] indicating that cognitive activity plays a significant role in the occurrence of positive posttraumatic change. It is also in line with the Cohen and Collens [20] VPTG model in trauma workers, which emphasizes that the undertaken remedial activity plays a key role in determining the changes occurring in the world view of trauma workers and the development of VPTG. It was assumed that positive coping strategies would be positively associated with the intensity of positive secondary posttraumatic change, and that they will play a predictive role for SPTG.

METHOD

The study involved 580 professionals exposed to indirect trauma. It was conducted in several centers in Poland, including crisis intervention centers, social care facilities, courts, hospices and hospitals. The participants were assured that the study was voluntary and anonymous. The study itself was approved by the bioethics committee.

The final analysis included data from 500 respondents. The inclusion criteria comprised holding a permanent job for at least a year involving helping people who had experienced traumatic events, and to fully complete the questionnaires. Most of the respondents were women (76.4%). The participants represented five professional groups, i.e.: therapists providing psychological assistance (n=80; 13.8% – men, 86.2% – women), paramedics (n=120; 61.7% – men, 38.3% – women), nursing staff employed in post-accident wards and working in palliative care (n = 65; 9.2% – men, 90.8% – women), social workers (n=95; 4.2% – men, 95.8% – women) and probation officers (n=140; 16.4% – men, 83.6% – women). The mean age for the entire group of respondents was 44.09 (SD = 9.85) and seniority

(work experience) was 15.94 years (SD = 10.0). Age and seniority turned out to be the highest in the group of probation officers and the lowest among therapists. The number of hours per week devoted to working directly with people impacted by trauma was 32.95 (SD = 22.22); the highest number of hours was recorded among paramedics, and the lowest among therapists. Secondary positive posttraumatic change was assessed using the Secondary Posttraumatic Growth Inventory and cognitive coping strategies using the Cognitive Processing of Trauma Scale.

The Secondary Posttraumatic Growth Inventory (SPTGI), developed by Ogińska-Bulik and Juczyński [23] is intended to measure positive changes associated with indirect exposure to trauma in professionals working with people impacted by trauma. It contains 12 statements (e.g. *I have learned to accept others more*) rated on a 6-point scale ranging from *I haven't experienced this change at all* (0) to *I have experienced this change very deeply* (5). The inventory allows the overall result to be determined as well as four factors: 1. New challenges and an increase in professional competences; 2. Increase in spiritual experiences and a sense of responsibility for others; 3. Greater trust in oneself and appreciating life, and 4. Increased acceptance and actions for the benefit of others. High reliability coefficients were obtained: 0.90 for the entire inventory, and 0.71, 0.85, 0.89 and 0.87 for each of the respective individual factors.

The Polish version of the Cognitive Processing of Trauma Scale (CPOTS), originally by Williams, Davis and Millsap [24], and adapted by Ogińska-Bulik and Juczyński [25], comprises 17 items (e.g. *Overall, there is more good than bad in this experience*). It measures five forms of cognitive processing of trauma, treated as cognitive strategies for coping: downward comparison, positive cognitive restructuring, resolution/acceptance, denial and regret. The result for each of the scales is calculated separately. The Polish version offers satisfactory reliability, as indicated by Cronbach's alpha, ranging from 0.89 to 0.56. Higher reliability is demonstrated for positive trauma processing strategies (0.90) than negative ones (0.73). The study used a version adapted to people indirectly exposed to trauma.

The study also employed a survey including questions regarding sex, age, seniority (work experience), and the number of hours per week working with people after traumatic experiences.

The data was analyzed using parametric tests. The differences between means were evaluated using one-way analysis of variance followed by Tukey's *post hoc* test. In addition, the data was also subjected to testing based on Pearson correlations coefficient and regression analysis (stepwise, progressive version).

RESULTS

The mean values of the data obtained for the whole sample, and for particular groups of professionals, are presented in Table 1 and Table 2¹.

Table 1. Means and standard deviations of SPTG of the surveyed professionals exposed to indirect trauma

Groups	SPTG-total		Factor 1		Factor 2		Factor 3		Factor 4	
	M	SD	M	SD	M	SD	M	SD	M	SD
1.	33.41	12.69	9.09	3.47	4.38	4.18	10.1	3.96	9.80	4.17
2.	30.74	12.74	7.33	3.34	7.12	3.84	8.53	3.86	7.77	3.74
3.	33.87	10.48	8.32	2.93	7.31	4.42	9.51	3.28	8.74	3.13
4.	28.52	11.76	6.82	3.24	5.23	3.96	9.29	4.27	7.17	3.73
5.	30.40	11.93	7.99	3.09	4.97	4.13	9.35	4.21	8.09	3.75

¹ Some of the results were used in other publications

	F=2,83; p< 0,05		F=6.58 p<0.001		F=9.67 p<0.001		F=2.07 ni		F=6.24 p<,0.001	
	1,3>4		1>2,4,5		2,3>1,4,5				1>2,4,6	

Notes:

Groups: 1. Therapists; 2. Paramedics; 3. Nursing staff; 4. Social workers; 5. Probations officers

Factor 1. New challenges and increased professional skills; Factor 2. An increase in spiritual experiences and a sense of responsibility for others; Factor 3. Greater self-confidence and appreciation of life; Factor 4. An increase in acceptance and acting for the benefit of others.

According to the criteria adopted for SPTGI [23], 148 professionals, i.e. 29.6% of all respondents, presented a low level of SPTG, 184 (36.8%) a medium level and 168 (33.6%) a high level. The studied groups of professionals exposed to indirect trauma differ in the severity of SPTG, although only to a small extent. The highest scores in SPTGI were achieved by therapists and nursing staff, while social workers achieved the lowest scores, i.e. the lowest level of positive post-traumatic changes. The therapists demonstrated the greatest changes in factor 1 – “New challenges and increased professional skills” and in factor 4 – “An increase in acceptance and acting for the benefit of others”: these values were

significantly higher than those noted in the other groups. In addition, the therapists exhibited the smallest changes in factor 2, indicating an increase in spiritual experiences and a sense of responsibility for others.

The degree of SPTG was found to be influenced by sex. The women showed a slightly higher degree of secondary positive post-traumatic change (M=31.72, SD=11.83) compared to men (M=28.89, SD=12.90; t=2.27, p<0.05). In addition, SPTG positively correlated with age (r=0.12, p<0.01) and work experience (r=0.12, p<0.01), but not with the number of hours per week devoted to providing direct assistance to injured persons (r=0.01).

Table 2. Means and standard deviations of applied cognitive coping strategies of the surveyed professionals exposed to indirect trauma

Groups	Coping strategies									
	1		2		3		4		5	
	M	SD	M	SD	M	SD	M	SD	M	SD
1.	16.55	2.86	5.96	4.37	12.87	4.91	5.96	4.37	1.90	2.55
2.	19.70	2.76	8.47	3.66	12.66	4.99	8.47	3.66	9.63	4.47
3.	19.89	2.99	9.26	3.51	13.17	4.43	9.26	3.51	8.60	4.55
4.	18.89	3.08	7.67	3.95	12.60	4.73	7.67	3.95	7.43	4.32
5.	18.91	3.41	7.03	4.35	13.38	5.22	7.03	4.37	3.92	3.48
	F(4.495)=9.36; p<0.001 1<2-5		F(4.495)=8,17; p<0.01 1<2,3,4 2,3>5		F(4.495)=0.52, ns		F=(4.495)=8.17; p<0.001 1<2,3,4 2,3>5		F(4.495)=66.62; p<0.001 1<2-5 2>4,5 3,4>5	

Notes:

Groups: 1. Therapists; 2. Paramedics; 3. Nursing staff; 4. Social workers; 5. Probations officers.

Coping strategies: 1. Downward comparison; 2. Positive cognitive restructuring; 3. Resolution/Acceptance; 4. Regret; 5. Denial

The cognitive coping strategies used by professionals exposed to indirect trauma, measured with CPOTS, are similar to those obtained

in standardization studies involving people who directly experienced trauma [25]. However, it is worth noting that therapists present a slightly

lower tendency to employ cognitive processing of trauma compared to the other studied groups of professionals. This is manifested by less frequent use of coping strategies such as downward comparison, positive cognitive restructuring, regret, and denial.

In the next step, the relationship between cognitive coping strategies and SPTG was established using Pearson's correlation coefficient. The results are presented in Table 3.

Table 3. Correlation coefficients between cognitive coping strategies and secondary posttraumatic growth in the surveyed professionals exposed to indirect trauma

Groups	Downward comparison	Positive restructuring	Resolution/ acceptance	Regret	Denial
Therapists (n=80)					
SPTG – Total	0.12	0.47***	0.44***	0.06	0.08
– Factor 1	-0.01	0.41***	0.34**	0.09	0.02
– Factor 2	0.13	0.33**	0.27*	-0.01	0.20
– Factor 3	0.13	0.41***	0.45***	0.11	0.01
– Factor 4	0.13	0.39***	0.36***	0.03	0.04
Paramedics (n=120)					
SPTG – Total	0.30***	0.28**	0.36***	0.09	0.17
– Factor 1	0.23*	0.15	0.30***	-0.08	0.02
– Factor 2	0.30***	0.26**	0.26**	0.18	0.22*
– Factor 3	0.24**	0.26**	0.37***	0.04	0.09
– Factor 4	0.28**	0.27**	0.29***	0.17	0.25**
Nursing staff (n=65)					
SPTG – Total	0.03	0.44***	0.23*	0.12	0.04
– Factor 1	0.21	0.35**	0.23*	0.29*	0.04
– Factor 2	-0.10	0.29*	0.08	0.06	0.13
– Factor 3	0.02	0.31**	0.29**	0.04	0.05
– Factor 4	0.04	0.40***	0.14	0.01	-0.14
Social workers (n=95)					
SPTG – Total	0.24*	0.44***	0.41***	0.16	0.28**
– Factor 1	0.19	0.31**	0.42***	0.01	0.18
– Factor 2	0.14	0.30**	0.25*	0.22	0.31**
– Factor 3	0.23*	0.37***	0.24*	0.09	0.24*
– Factor 4	0.18	0.36***	0.40***	0.15	0.12
Probation officers (n=140)					
SPTG – total	0.09	0.27**	0.26**	0.16	-0.05
– Factor 1	-0.06	0.18*	0.21**	0.11	-0.14
– Factor 2	0.11	0.21**	0.26**	0.11	-0.03
– Factor 3	0.17*	0.22**	0.23**	0.15	-0.07
– Factor 4	0.03	0.23**	0.12	0.14	0.05
The whole group (n=500)					
SPTG – Total	0.14**	0.34***	0.34***	0.09*	0.06

- Factor 1	0.03	0.21***	0.30***	-0.01	-0.07
- Factor 2	0.19***	0.31***	0.22***	0.18***	0.26***
- Factor 3	0.13**	0.26***	0.30***	0.04	-0.01
- Factor 4	0.06	0.26***	0.25***	0.05	-0.01

Notes:

Factor 1. New challenges and increased professional skills; Factor 2. An increase in spiritual experiences and a sense of responsibility for others; Factor 3. Greater self-confidence and appreciation of life; Factor 4. An increase in acceptance and acting for the benefit of others

*** p<0.001; ** p<0.01; p<0.05

The correlation coefficients presented in Table 3 indicate that SPTG (overall score) is positively associated with all three positive cognitive coping strategies, *viz.* cognitive restructuring, resolution/acceptance, downward comparison, and to a lesser extent, with one negative strategy: regret. Only the denial strategy showed no relationship with SPTG. All analyzed groups of professionals demonstrated positive associations between SPTG and cognitive restructuring and resolution/acceptance, although the therapist and social worker groups exhibited slight-

ly higher correlation coefficients than the other groups. The highest correlation coefficients were found for Factor 3, i.e. Greater self-confidence and appreciation of life.

The next stage attempted to identify the cognitive coping strategy that played a predictive role for SPTG. All strategies that significantly correlated with the overall SPTGI score in each of the surveyed groups of professionals was subjected to regression analysis. The results are presented in Table. 4.

Table 4. Predictors of secondary posttraumatic growth (total) in professionals exposed to indirect trauma

	Beta	Error of Beta	B	Error of B	t	p<
Therapists (n=80)						
- Positive restructuring	0.33	0.11	0.97	0.32	2.97	0.01
- Resolution/acceptance	0.27	0.11	0.70	0.29	2.42	0.02
R= 0.52; R ² =0.27						
Paramedics (n=120)						
- Resolution/acceptance	0.27	0.09	0.69	0.24	2.85	0.01
R=0.39; R ² =0.14						
Nursing staff (n=65)						
- Positive restructuring	0.44	0.11	1.30	0.33	3.85	0.001
R=0.44; R ² =0.19						
Social workers (n=95)						
- Resolution/acceptance	0.25	0.12	0.63	0.31	2.04	0.05
- Positive restructuring	0.20	0.12	0.62	0.38	1.98	0.05
R=0.50; R ² =0.23						
Probation officers (n=140)						
- Positive restructuring	0.19	0.08	0.53	0.24	2.17	0.05
- Resolution/acceptance	0.19	0.08	0.42	0.20	2.10	0.05
R=0.32; R ² =0.10						
Total group (n=500)						

- Resolution/acceptance	0.24	0.04	0.59	0.12	4.94	0.001
- Positive restructuring	0.25	0.05	0.74	0.15	4.77	0001
R=0.40; R ² =0.15						

Notes:

R² – coefficient of determination; Beta—standardized regression coefficient; **B**—unstandardized regression coefficient

The results of the regression analysis confirmed that positive cognitive strategies, especially cognitive restructuring and resolution/acceptance, played an important role in the occurrence of SPTG; however, they did not make a strong contribution to predicting the severity of secondary positive post-traumatic changes. For the entire group of surveyed professionals, these two strategies explain 15% of the variance in the dependent variable; of these, the resolution/acceptance strategy had a greater share, explaining 11% of the variance. However, the contribution of these strategies as predictors of SPTG depended on the surveyed group of professionals. The two strategies explain the most variance in SPTG in the group of therapists (27%); in this case, the cognitive restructuring strategy had a greater share of the variance (22%) with the resolution/acceptance strategy explaining only 5%. Among the social workers, the two strategies together explain 23% of the variance, again with cognitive restructuring having a greater share (18%). Among the probation officers, both strategies together explain only 10%, with cognitive restructuring predominating (7%). Finally, among the paramedics, the only predictor of SPTG was the resolution/acceptance strategy, explaining 14% of the variance, and among nursing staff, the only predictor was positive cognitive restructuring, explaining 19% of the variance. Downward comparison, a positive strategy, did not demonstrate any significant contribution to predicting SPTG among any group, nor did the two negative strategies, regret and denial.

DISCUSSION

Working with traumatized clients may be a source of secondary positive post-traumatic change for professionals: our results indicate a high level of SPTG in that just over 33% of the tested professionals, a medium level in 37% and

a low level in 30%. Therapists and nursing staff demonstrated a higher intensity of SPTG than social workers. It indicates that mainly therapists and nursing staff are capable of achieving certain benefits from working with people impacted by trauma. This kind of work can serve them as an opportunity for the development of professional competence, building a greater appreciation of life, increased acceptance and action for others, the development of spiritual changes and sense of responsibility for other people. While the mechanism behind these benefits may not seem obvious in relation to nursing staff, they are understandable in the case of therapists. Many therapists have a psychological background, and generally have the knowledge and competence to deal with trauma experienced by others, and which may promote adaptation to trauma. This adaptation may be expressed, on the one hand, by a relatively low intensity of STS, and, on the other, by at least a moderate level of SPTG.

Previous studies of professionals working with people after traumatic experiences (11, 15,16,26] showed that therapists (psychologists) demonstrated a lower severity of STS than the other groups exposed to indirect trauma. It is also possible that the knowledge and competences possessed by therapists better enable them to see the positive consequences of their work, including experiencing SPTG. This also indicates that therapists are able to give meaning to traumatic events experienced by others, which is the essence of SPTG.

In turn, numerous studies have found nursing staff to show a high severity of STS [27-29]. However, these professionals also revealed a relatively high intensity of SPTG. Perhaps nursing staff are able to give meaning to the traumatic events experienced by others, regardless of the level of stress experienced. The sex of the respondent may also play a certain role in this case: women predominated in the surveyed groups of therapists and nursing staff,

and research [30,31] indicates that women usually experience higher SPTG than men. However, this would not be consistent with the results obtained by social workers, among whom women also predominated.

Social workers showed the lowest level of SPTG. While this may result from the different nature of their work, it is also possible that social workers display lower competences in dealing with the trauma experienced by others compared to other professionals, and therapists, in particular. They also may have depleted some of the resources needed to cope with the stress associated with helping others. It cannot also be ruled out that social workers derive less job satisfaction, and they have been found to be at high risk of burnout [32]. These added burdens may make it difficult for them to give meaning to the traumatic situations experienced by the clients and thus limit their perception of positive post-traumatic changes.

It is worth noting that the results of this study are not consistent with those obtained by Manning-Jones et al. [15] from five professional groups from New Zealand: nurses, doctors, psychologists, counselors and social workers. In this case, the psychologists achieved the lowest level of SPTG, and social workers the highest. It is possible that these differences are associated with cultural factors.

All three positive coping strategies, *viz.* cognitive restructuring, resolution/acceptance and downward comparison, correlate with SPTG. This was particularly true for cognitive restructuring and resolution/acceptance, which turned out to be positively associated with SPTG in all groups of professionals exposed to indirect trauma. These two strategies primarily promote performance, greater self-confidence and appreciation of life (Factor 3).

It is worth noting that also regret, a negative strategy, also positively correlates with SPTG, albeit weakly. This indicates that experiencing regret due to the trauma experienced by patients/clients may favor the occurrence of secondary positive post-traumatic change.

Cognitive restructuring and resolution/acceptance were found to play a predictive role for SPTG, primarily among therapists and social workers. It is worth noting that in the group of social workers, cognitive restructuring was also

a positive predictor of the negative effects of indirect exposure to trauma, explaining 10% of the variance of STS symptoms [26]. This may suggest that this strategy may have a significant role in the occurrence of consequences of indirect exposure to trauma, regardless of whether they are negative or positive.

The obtained results are consistent with previous data on the links between cognitive coping strategies and SPTG [21,22,33]. They also confirm the PTG model, which was developed for people who have directly experienced trauma [3, 4, 19] and the VPTG in trauma workers model [20], indicating that cognitive coping activity plays a significant role in the occurrence of positive posttraumatic change.

The study has some limitations. The research was cross-sectional, which does not allow conclusions to be drawn regarding cause-effect relationships. Also, a significant majority of respondents were women and individual groups of professionals differed in size. The study did not take into account the types of traumatic events experienced by patients/clients. Also, the study did not take into account any traumatic experiences that may have been directly experienced by the surveyed professionals themselves, nor did it include any work-related indicators or socio-demographic variables.

Nevertheless, despite its limitations, the findings bring new content to the range of links between cognitive processing of trauma and the positive consequences of indirect exposure to trauma. A key advantage of the study is the use of a new measurement tool developed to assess secondary positive post-traumatic changes among professionals working with people impacted by trauma: the Secondary Posttraumatic Growth Inventory.

The study may be an inspiration for further research directed towards the relationships between SPTG and other indicators of cognitive processing of trauma, such as ruminations or disruptions in core beliefs. Longitudinal studies that capture changes in SPTG symptoms also seem desirable.

The findings may be used in practice to develop programs to promote SPTG. Such programs, intended primarily for social workers, should aim to extend the competences of professionals in dealing with trauma experienced by others.

This can be achieved by, among other things, more frequent use of positive cognitive coping strategies.

CONCLUSION

Based on the results of the conducted research, the following conclusions can be drawn:

1. Working with traumatized clients can be a source of positive posttraumatic change for professionals, expressed in the form of secondary posttraumatic growth.
2. Therapists and nursing staff appear more capable of perceiving positive changes than other groups of professionals, particularly social workers.
3. Two positive coping strategies, i.e. cognitive restructuring and resolution/acceptance, play a significant role in the occurrence of SPTG.
4. Professionals may benefit from expanding their competences in dealing with trauma experienced by others, especially social workers.

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