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RUMINATIONS AND EFFECTS OF TRAUMA IN WOMEN EXPERIENCING DOMESTIC VIOLENCE

The study aimed to establish the relationship between ruminations and the occurrence of negative (posttraumatic stress disorder symptoms) and positive (posttraumatic growth) effects of trauma resulting from the experience of violence in the family. The data of 89 women who have experienced domestic violence were analyzed. The participants' age ranged from 18 to 60 years ($M = 34.36$, $SD = 12.81$). The following Polish versions of standardized tools were used: the Impact of Event Scale, the Posttraumatic Growth Inventory, and the Event-Related Rumination Inventory, the last of these measuring two types of ruminations: intrusive and deliberate. Both types of ruminations proved to be associated, above all, with posttraumatic stress disorder symptoms. Weaker associations were noted between the intensity of deliberate ruminations and posttraumatic growth. Intrusive ruminations played a predictive role with regard to posttraumatic stress disorder: above all, with regard to intrusion and arousal; deliberate ruminations proved to be a predictor of posttraumatic growth, mainly positive changes in self-perception and relations with others. Ruminations play an essential role in the occurrence of both negative and positive outcomes of the experienced trauma.

Keywords: posttraumatic stress disorder; posttraumatic growth; ruminations; women; domestic violence.

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INTRODUCTION

The experience of violence as a traumatic event

Domestic violence, also called family violence, means an intentional action using the advantage of strength against a family member, which violates their rights and personal goods as well as causes their suffering and moral damage (Act of July 29, 2005, on counteracting domestic violence. Dz. U. [*Polish Journal of Laws*] no. 180, item 1493). Family violence is a frequent phenomenon, although its scale is not fully known. This is because many victims do not report domestic violence, mainly because they are afraid of the perpetrator, who is usually their husband/partner or father. Violence affects mainly women and children.

The “Blue Card” data gathered by the Polish police (www.statystyka.policja.pl/wybrane-statystyki) reveal that in 2014 the overall number of victims of violence amounted to 105,332, including 72,786 women. It should be added that this means a considerable increase compared to the previous year, when 58,310 women were victims of violence. The data collected by the Center for Public Opinion Research (CBOS, 2012) reveal that one in nine respondents living in a stable relationship (11%) declared that they had experienced domestic violence (5% admit that in their case such events occurred at least a few times). Also one in nine adults (11%) admit to having been a perpetrator of domestic violence, although a majority of them (8%) claim that these were isolated occurrences.

Domestic violence can take different forms: physical, psychological, sexual, and economic. The first two of these occur the most often and usually go together. There is no doubt that the experience of violence has many negative consequences, manifesting themselves in various domains of the individual’s functioning. The most visible and obvious outcomes of violence are physical injuries. Dąbkowska (2009) cites data showing that between 10% and 50% of women have experienced physical abuse from their partner in their life. However, what is much more destructive than physical injuries is the mental consequences of the violence experienced. Violence results in strong negative emotions, the most frequent ones being anxiety, anger, regret, shame, terror, and a sense of guilt. Women living in a relationship in which violence is used have a low sense of self-worth and limited ability to take part in social life; they lack a sense of security.

Many women experienced violence in childhood. Abuses in this period of life significantly augment the risk of psychosomatic diseases in adulthood.

According to Dąbkowska (2006), they increase the risk of addiction to psychoactive substances (nearly 5 times), the risk of alcohol addiction (more than 2 times), and the risk of suicide attempts (nearly 4 times).

One of the consequences of experiencing violence is posttraumatic stress disorder (PTSD). For this disorder to be diagnosed, the emergence of three groups of symptoms is required, namely: intrusion, avoidance, and hyperarousal. In the latest, fifth edition of DSM (APA, 2013), posttraumatic stress disorder was transferred from the category of neurotic disorders to trauma- and stressor-related disorders. Eight diagnostic criteria for PTSD were distinguished. They include three new ones, relating to negative cognitive and emotional alterations, namely: (1) persistent and excessively negative beliefs and expectations about oneself, others, and the world, manifesting themselves in the individual's views; (2) persistent distorted blame of self or others for causing the traumatic event or for the resulting consequences; (3) persistent negative emotional state, comprising: fear, anger, horror, shame, and a sense of guilt.

In the study conducted by Dąbkowska (2009), all the female participants who had experienced domestic violence exhibited PTSD symptoms, 76.5% of them to a moderate or considerably high degree; 23.5% exhibited low-intensity PTSD symptoms. The results were similar in a study of teenage girls who had been sexually abused in childhood (McLean, Morris, Conklin, Jayawickreme, & Foa, 2014). That study yielded data showing that all the girls exhibited a moderate or high level of PTSD. A higher level of the symptoms of this syndrome was found in those girls in whose case the perpetrator was a close relative.

The research conducted in recent years shows that the experience of trauma can also result in positive changes, manifesting themselves in the form of posttraumatic growth (PTG). They include alterations in self-perception, in relations with others, and in the spiritual domain. Changes in the last of these areas take the form of greater appreciation of life and a deepening of spirituality/religiousness (Tedeschi & Calhoun, 1996, 2004; Ogińska-Bulik, 2015). It should be clearly stressed that posttraumatic growth does not mean that the experience of trauma itself was good, desirable, or necessary for effecting change or development in the person. It does not mean carefree attitude, pleasant mood, or a sense of happiness. The experience of a traumatic event may lead to growth, but grappling with it involves a state of distress, negative emotions, and a depletion of the person's resources – especially in the early stage. Yet, as Tedeschi and Calhoun (2004) emphasize, apart from loss, pain, and suffering, it is possible for a traumatic event to be a source of something good, too. As a result, through the experience of suffering, loss is transformed into a value of importance to the

person. What is more, this deeper understanding of oneself and the surrounding reality enables the person to cope with adversities more effectively in the future.

The few existing studies indicate that trauma connected with family violence may also result in positive changes, manifesting themselves in the form of post-traumatic growth. They have been found in women who experienced physical, emotional, and sexual violence in their childhood (Cobb, Tedeschi, Calhoun, & Cann, 2006; Lev-Wiesel, Amir, & Besser, 2005). They have also been found in women who were sexually abused in childhood (Draucker, 2001; Senter & Caldwell, 2002). Research conducted in Poland (Ogińska-Bulik, 2013) confirmed that posttraumatic growth does occur in women who have experienced family violence. However, only 7.6% of the surveyed women experienced high PTG, 56.6% exhibited low PTG (this included one person who observed no positive change in herself resulting from trauma), and 35.8% exhibited moderate PTG.

The emergence of positive posttraumatic changes does not exclude negative consequences of the event experienced. Studies of people who have experienced violence point to the simultaneous occurrence of positive and negative consequences of the situations experienced, including symptoms of depression or post-traumatic stress (Cobb et al., 2006; Lev-Wiesel et al., 2005).

Ruminations and negative and positive effects of trauma

The experience of a traumatic event activates cognitive processes and induces the individual to reflect on and analyze the situation experienced. According to the revised model of posttraumatic growth (Calhoun, Cann, & Tedeschi, 2010), the traumatic event induces a state of strong distress as well as upsets the individual's existing cognitive schemata and beliefs. At the same time, if the experienced event constitutes a significant challenge for the person, it "triggers off" cognitive processes that may lead to a change in the current schemata. It should be added that the event must be strong enough to force the individual to revise their assumptions regarding themselves and the world. The process of cognitive involvement in a person who has experienced trauma aims at coping with the situation experienced and at rebuilding the destroyed schemata. The destruction of cognitive schemata and then the attempts to rebuild them induce the individual to reflect on themselves and their place in the existing world. As a result, cognitive processing is triggered off. Gradually, the person begins to accept the new, changed reality, to orient themselves towards the future, as well as to formulate new life goals and tasks. This change of priorities and the identification of new opportunities and paths in life is one of the most important

aspects of posttraumatic growth. This is connected with the ability both to partly maintain and to abandon unattainable goals while replacing them with new, attainable ones. The individual experiences growth and practical wisdom, and the rebuilt cognitive structures become more flexible and more resistant to destruction.

What plays a key role in the cognitive processing of trauma is ruminations. Ruminations are usually seen as having negative connotations. They are usually treated as undesirable intrusive thoughts, appearing and recurring without apparent cause (Cann et al., 2011). Nolen-Hoeksema (2000) defines ruminative thinking as passive and lingering focus of attention on the negative emotions experienced as well as their causes and effects. Understood in this way, rumination means typical “chewing on” negatively tinged contents, which leads to a lowering of mood.

Ruminations relating to the negative event one has experienced can play diverse roles, however. Intrusive ruminations, appearing automatically, which the individual is unable to control, have a maladaptive character and contribute to the lingering of the symptoms of posttraumatic stress (Cann et al., 2011; Ehring & Ehlers, 2014). In contrast, deliberate/reflective ruminations, whose aim is to analyze the situation in order to find ways of resolving it, are adaptive (Cann et al., 2011). Ruminations of this kind are conducive to “trauma processing” and growth processes (Calhoun, Cann, & Tedeschi, 2010; Cann et al., 2011). A positive association of ruminations, especially intrusive ones, with the occurrence of PTSD has been found in numerous studies – for example, in people who were victims of violence (Michael, Halligan, Clark, & Ehlers, 2007).

A new direction in research is the role of ruminations in the emergence of positive posttraumatic changes. A positive association between ruminations and the occurrence of positive posttraumatic changes was found in people who had experienced a stroke (Gangstad, Norman, & Barton, 2009) or struggled with cancers (Chan, Ho, Tedeschi, & Leung, 2011; Morris & Shakespeare-Finch, 2011).

The available research results suggest that ruminations are cognitive mechanisms underlying both negative and positive consequences of the experience of trauma. This seems to be confirmed by studies analyzing the significance of ruminations in the emergence of both PTSD and PTG. A positive association of ruminations with PTSD and PTG was found in students who had experienced various negative life events (Calhoun et al., 2010) and among paramedics, exposed to trauma due to the kind of work they did (Ogińska-Bulik, 2015). In the group of paramedics, intrusive ruminations were positively associated mainly with PTSD, and both types of ruminations – intrusive and deliberate – correlated

positively with the level of posttraumatic growth, the associations being stronger in the case of deliberate ruminations. In Poland, no research has been conducted into the role of ruminations in the emergence of positive and negative consequences of trauma in people experiencing family violence.

RESEARCH OBJECTIVE AND METHOD

The aim of the present study was to determine the relation between ruminations and the intensity of negative and positive consequences of trauma. The indicator of negative consequences was PTSD symptoms, and the indicator of positive ones was PTG. Answers to the following research questions were sought:

1. What is the intensity of PTSD symptoms and what is the level of PTG in women experiencing family violence?
2. What is the level of ruminations relating to the traumatic events experienced? Are ruminations associated with the level of negative and positive consequences of these events?
3. Which type of ruminations allows for predicting the occurrence of negative and positive posttraumatic changes?

The adopted model of research is based on the conception proposed by Calhoun and colleagues (2010), assuming a significant contribution of ruminations to the occurrence of negative and positive consequences of trauma. It was assumed that both types of ruminations – intrusive and deliberate – would be associated with the intensity of PTSD and PTG symptoms, and that intrusive ruminations would be associated more strongly with PTSD and deliberate ruminations with PTG.

The participants were 100 women who had experienced family violence. These people were beneficiaries of the assistance provided by a few institutions helping the victims of domestic violence in central Poland. The women completed the prepared set of questionnaires during a meeting with a psychologist employed in the institution.¹ The questionnaires were then sent to the person collecting the data. The women participating in the study were informed about its aim and about the possibility of resigning from participation. Consent for conducting the study was obtained from the respective bioethics commission. The analysis included the scores of 89 women who had completed all the questionnaires they received without leaving any gaps. The participants' age ranged from 18 to 60

¹ The data were collected by Karina Wichurska, a participant in the graduate seminar.

years ($M = 34.36$, $SD = 12.81$). The largest group (48%) was women aged 21-30. The duration of experiencing violence ranged from half a year to 30 years ($M = 8.13$, $SD = 5.72$).

Apart from a survey with questions about the participants' age and the duration of experiencing violence, three standard measures were used in the study:

The revised version of **Impact of Event Scale (IES-R)** by Weiss and Marmar, adapted into Polish (Juczyński, & Ogińska-Bulik, 2009), is used to determine the subjective sense of discomfort connected with the event one has experienced. It consists of 22 items and measures the general level of PTSD and its three dimensions, namely: (1) intrusion, manifesting itself in recurring trauma-related images, dreams, thoughts, or sensations; (2) hyperarousal, characterized by hypervigilance, anxiety, impatience, and difficulties in focusing attention; (3) avoidance, manifesting itself in efforts to get rid of thoughts, emotions, or conversations related to trauma. The participant indicates responses using a 5-point Likert scale. The instrument has acceptable psychometric parameters, and its reliability measured using Cronbach's alpha is .75.

The **Posttraumatic Growth Inventory** by Tedeschi and Calhoun, adapted into Polish by Ogińska-Bulik and Juczyński (2010), consists of 21 statements describing various positive changes resulting from the experience of a traumatic event. The participant responds to the statements provided by indicating answers from 0 – *I did not experience this change as a result of my crisis*, to 5 – *I experienced this change very great degree as a result of my crisis*. Apart from the general level of PTG, the Polish version of the inventory, measures four factors constituting posttraumatic growth: (1) changes in self-perception, (2) changes in relations with others, (3) greater appreciation of life, and (4) spiritual changes. The overall score is the sum of these four factors. The reliability coefficients are comparable with those of the original version (Cronbach's alpha = .93).

The **Event-Related Rumination Inventory**, developed by Cann and colleagues and adapted into Polish by Ogińska-Bulik and Juczyński (2015), consists of two subscales with 10 items in each. The first of these covers intrusive ruminations, which are uncontrolled, and the second one covers deliberate (reflective) ones. The respondent rates the items on a 4-point Likert scale (from 0 – *not at all*, to 3 – *often*). The scores are computed separately for each subscale. The inventory has very good psychometric properties (Cronbach's alpha is .96 for intrusive ruminations and .92 for deliberate ruminations). The investigator analyzed current ruminations, which had occurred during the last two weeks before the study.

RESULTS

The distribution of scores on the analyzed variables is normal, which makes it legitimate to use parametric tests. In consecutive steps, the investigator computed the means for the analyzed variables, determined the correlations between ruminations and the intensity of negative and positive consequences of trauma (Tab. 1), as well as identified the predictors of PTSD and PTG.

Table 1
Means and Standard Deviations for the Analyzed Variables in the Surveyed Sample of Women and Coefficients of Correlations Between Ruminations and PTSD and PTG

Variables	<i>M</i>	<i>SD</i>	Ruminations	
			intrusive	deliberate
PTSD – overall	52.65	14.05	.58***	.40***
Intrusion	19.15	7.35	.59***	.33**
Hyperarousal	17.90	5.61	.61***	.49***
Avoidance	15.60	5.06	.07	.07
PTG – overall	55.30	21.64	.08	.22*
Changes in self-perception	23.52	10.39	.09	.23*
Changes in relations with others	18.45	7.95	.08	.22*
Appreciation of life	8.93	3.90	-.01	.16
Spiritual changes	4.40	3.20	.05	-.02
Intrusive ruminations	18.84	8.07		
Deliberate ruminations	19.17	7.35		

Note. *M* – mean, *SD* – standard deviation.

With 33 points being the cut-off criterion for the overall score on the Impact of Event Scale (Juczyński & Ogińska-Bulik, 2009), it can be concluded that 80 women experiencing family violence (89.9% of the sample) exhibited a moderate or high level of PTSD symptoms. A low level of PTSD was found in only nine women (10.1%). It was also investigated whether the respondents exhibited similar or diverse levels of specific PTSD symptoms. For this purpose, I divided the scores on specific symptoms (intrusion, hyperarousal, and avoidance) by the number of items in each scale. The resulting value was the highest on hyperarousal ($M = 2.55$), which differed statistically significantly from avoidance ($M = 2.22$, $p < .05$), but not from intrusion ($M = 2.39$).

The mean PTG score in the sample of women corresponds to the sten score of 6 and indicates a moderate level of positive posttraumatic changes. In the light of the norms (Ogińska-Bulik & Juczyński, 2010), 38 women (42.7%) exhibited a low level, 29 (32.6%) a moderate level, and 22 (24.7%) a high level of growth after trauma. The investigator also checked in which dimension of PTG the changes were the largest. The scores on particular dimensions were divided by the number of items in these dimensions in order to check if there were statistically significant differences between them. The level of PTG was the highest in the appreciation of life dimension ($M = 2.97$), but it differs significantly ($p < .01$) only from the level of changes in the spiritual domain ($M = 2.2$). It does not differ from the level of changes in self-perception ($M = 2.61$) and relations with others ($M = 2.63$).

The mean scores on both types of ruminations in women experiencing family violence are similar to the results of the normalization research (Ogińska-Bulik & Juczyński, 2015). The mean for intrusive ruminations corresponds to the sten value of 5, and the mean for deliberate ruminations corresponds to 6, which means their level is moderate. When relating the intensity of ruminations exhibited by the respondents to the norms, it should be noted that 28 (31.5%) exhibited a low level, 32 (34.8%) – a moderate level, and 30 (33.7%) – a high level of intrusive ruminations. As regards deliberate ruminations, these figures are as follows: low level – 22 (24.7%); moderate level – 25 (28.1%); high level – 42 (47.2%). The mean score on deliberate ruminations is slightly higher but does not differ statistically significantly from the mean score on intrusive ruminations. The two types of ruminations are positively correlated with each other ($r = .48$, $p < .001$), which means that an increase in the tendency to engage in intrusive ruminations is accompanied by an increase in the tendency to engage in deliberate ruminations.

The respondents' age and the length of the experience of violence are not associated to a statistically significant degree with the level of positive and negative posttraumatic changes. We noted only weak correlations of one of the PTSD dimensions – namely, the avoidance dimension – with the women's age ($r = -.25$, $p < .05$) and with the length of their experience of family violence ($r = -.27$, $p < .05$).

In the next step, using Pearson's correlation coefficients, the investigator determined the associations between ruminations and the levels of negative and positive consequences of trauma (cf. Table 1). Ruminations are associated, above all, with the negative consequences of trauma. This association is positive, which means that the stronger is the tendency to ruminate on the experienced event, the

stronger are the symptoms of PTSD. The values of correlation coefficients are higher in the case of intrusive ruminations. Deliberate ruminations are also associated with PTG – that is, with the overall score and with changes in relations with others, but the obtained values of correlation coefficients are lower than in the case of PTSD.

The aim of the next step of data analysis was to identify predictors of negative and positive consequences of the experience of trauma, treated as explained variables. The explanatory variables were the two types of ruminations. Regression analysis (stepwise progressive version), performed for the overall scores on the Impact of Event Scale and the Posttraumatic Growth Inventory as well as for their specific dimensions, indicated the significance of intrusive ruminations to PTSD symptoms and deliberate ruminations to PTG.

Intrusive ruminations play a predictive role with regard to PTSD symptoms (the overall level), explaining 35% of the variance in the dependent variable ($\beta = 0.50, p < .001$). This type of ruminations turned out to be a predictor of intrusion, explaining a similar percentage (35%) of the variance in the dependent variable ($\beta = 0.59, p < .001$). In the case of hyperarousal, both types of ruminations are predictors, together explaining 43% of the variance – with intrusive ruminations ($\beta = .48, p < .001$), whose contribution to the prediction is 37%, playing a considerably more important role compared to deliberate ruminations, which explain only 6% of the variance in the dependent variable ($\beta = 0.27, p < .01$). Neither type of ruminations plays a predictive role with regard to avoidance.

The type that predicts PTG is deliberate ruminations. However, their contribution to explaining the dependent variable is small and amounts to only 5% ($\beta = 0.22, p < .05$). Deliberate ruminations turned out also to be predictors of two dimensions of PTG, namely changes in self-perceptions ($\beta = 0.23, p < .05$) and changes in relations with others ($\beta = 0.22, p < .05$); in both cases, they explained 5% of the variance in the dependent variable. Ruminations do not allow for predicting the levels of the remaining two dimensions of PTG: appreciation of life and changes in the spiritual domain.

Given that the object of the analyses was current ruminations, it can be assumed that the consequences of the experienced trauma – in the form of both PTSD symptoms and positive posttraumatic changes – can feed back on the intensity of ruminations. Therefore, in further analyses, it was checked which of the experienced effects of trauma (i.e., PTSD or PTG) made it possible to predict ruminations, both intrusive and deliberate.

The one that turned out to be a predictor of intrusive ruminations was PTSD symptoms, explaining 33% of the variance in the dependent variable ($\beta = 0.57$, $p < .001$). A more detailed analysis, distinguishing between specific symptoms of PTSD, indicated a predictive role of hyperarousal ($\beta = 0.37$, $p < .001$, $R^2 = .35$) and a much weaker predictive role of intrusion ($\beta = 0.32$, $p < .001$, $R^2 = .05$). Both PTSD ($\beta = 0.40$, $p < .001$) and PTG ($\beta = 0.22$, $p < .05$) were found to be predictors of deliberate ruminations, and it was the contribution of the negative effects of trauma that turned out to be more significant. It explained 15% of the variance in the dependent variable (compared to 5% explained by PTG). A more detailed analysis, in which the explanatory variables were individual factors, provided data showing that, of PTSD symptoms, it is hyperarousal that plays a predictive role ($\beta = 0.48$, $p < .05$, $R^2 = .23$), and among PTG dimensions it is positive changes in self-perceptions ($\beta = 0.28$, $p < .05$, $R^2 = .05$).

CONCLUSION AND DISCUSSION

The surveyed women who had experienced domestic violence exhibited mainly negative effects of these events. Nearly 90% of them exhibited a moderate or high level of PTSD. This is a result higher compared to that of people who experienced other kinds of traumatic events. For comparison, in a study of rescue service workers, exposed to traumatic events due to their professional duties, the percentage of participants with a moderate or high level of PTSD symptoms (measured by means of the Impact of Event Scale-Revised) was 25% for firefighters and 42% for paramedics (Ogińska-Bulik, 2015). The obtained results indicate that, compared to other traumatic events, the experience of domestic violence leads to stronger PTSD symptoms. The results correspond with the data obtained by Dąbkowska (2009), indicating that all the women she surveyed who had experienced domestic violence exhibited PTSD symptoms, 76.5% of them to a moderate or high degree. The presented results, showing a high level of PTSD symptoms, suggest the occurrence of difficulties in the assimilation of new information stemming from the experienced trauma in the surveyed women experiencing family violence.

Regardless of the negative effects of trauma, the women also exhibited positive changes in the form of PTG, though only 25% of these women experienced a high level of PTG. Larger changes concerned the appreciation of life. Although the level of PTG was in the average band, the percentage of people with a high level of growth turned out to be lower than, for instance, in oncologically ill

women after mastectomy, where it was 50% (Ogińska-Bulik, 2010). This indicates that, compared to other kinds of experiences, trauma connected with the experience of family violence is associated with a lower level of positive post-traumatic changes.

The intensity of ruminations in the surveyed women exposed to violence is close to the values of this variable found in people who have experienced other traumatic events (Ogińska-Bulik & Juczyński, 2015). It is worth noting the slightly stronger tendency of these women to engage in deliberate ruminations – the level of this variable was high in over 42% of the participants, compared to 34% in the case of intrusive ruminations. This situation is probably due to the fact that the analysis concerned current ruminations, occurring recently, not ones occurring directly after the traumatic event.

Both types of ruminations are associated mainly with PTSD symptoms, the associations being stronger in the case of intrusive ruminations. In contrast, post-traumatic growth is associated only with the occurrence of deliberate ruminations. Regression analysis confirmed the significant role of intrusive ruminations in predicting PTSD symptoms, particularly intrusion and arousal. Deliberate ruminations turned out to be predictors – weak ones – of PTG, making it possible to predict positive changes in self-perception and in relations with others.

The obtained results, mainly those concerning the positive association of intrusive ruminations with negative consequences of trauma, are consistent with expectations and with data presented in the literature. This kind of finding can be partly explained by the positive interrelations of intrusive ruminations with intrusion, one of the three symptoms of PTSD, which suggests that the variance may have a common source. These are not identical concepts, though. As pointed out by Ehling and Ehlers (2014), intrusions – referring, just like ruminations, to recurring thoughts, images, and emotions connected with trauma – last for a short time and reflect the experience of the trauma itself. Ruminations, by contrast, are understood as a train of thoughts resulting from the event experienced – but one but lasting for a long time. This means these are related but distinct phenomena. It should be added that the available studies (Helgeson, Reynolds, & Tomich, 2006; Ogińska-Bulik, 2015, Shakespeare-Finch & Lurie-Beck, 2014) have provided data showing that PTSD symptoms, especially intrusion, are linked with the occurrence of positive posttraumatic changes, although the character of this relation may be diverse (linear and curvilinear).

The results indicating a stronger association of deliberate ruminations with PTSD than with PTG were rather unexpected. They can be due, in some way, to the fact that the women participating in the studies experienced multiple and

complex trauma connected with violence (mainly physical and psychological violence). What is more, they remained in toxic relationships. This means they were still exposed to contact with the perpetrators of violence and, presumably, to further similar traumatic experiences. Thus, they continued to experience the negative emotions relating both to the past and to the future. In this situation, reflecting on and analyzing the events experienced (deliberate rumination), even if it is connected with looking for ways to cope with the problem, may favor the lingering of negative consequences rather than promote seeking positive ones. This seems to be consistent with the data suggesting that negative emotions may affect the intensity of ruminations and their association with PTG (Boyras & Efstathiou, 2011). It is worth mentioning that in a study of paramedics, who were also exposed to multiple trauma due to their professional duties, it was deliberate ruminations that played a greater role in the emergence of growth after trauma (Ogińska-Bulik, 2015). In a study of people with HIV (Ogińska-Bulik, 2016), both types of rumination were positively associated with PTSD symptoms but not associated with PTG. The only significant correlation was found between deliberate ruminations and positive changes in self-perceptions. The significance of ruminations, especially deliberate ones, to PTSD and PTG, suggests common cognitive mechanisms underlying the negative and positive consequences of trauma. Further research is needed to confirm this, however.

The results of the present research as well as the studies reported in the literature suggest that the relation between ruminations and the level of negative and positive posttraumatic changes has a complex nature and probably depends on the kind of traumatic event experienced. Relations of this kind are also modified by the sex of the individuals experiencing trauma. The available studies reveal that, compared to men, women are more likely to exhibit PTSD symptoms (Dudek, 2003; Juczyński & Ogińska-Bulik, 2009), but they also derive greater benefits from traumatic experiences (Ogińska-Bulik & Juczyński, 2010) and show a stronger tendency to ruminate (Ogińska-Bulik & Juczyński, 2015).

It should be noted that lingering symptoms of PTSD – and this is the case in the present sample – as well as the positive posttraumatic changes that appear with time may also feed back on rumination concerning the violence experienced, hindering or facilitating the process of coping with trauma. This seems to be confirmed by analyses concerning the role of PTSD symptoms, particularly hyperarousal, in predicting intrusive ruminations. The experienced effects of trauma have slightly smaller significance to deliberate ruminations, but also in this case PTSD symptoms, mainly hyperarousal, play a greater role than PTG symptoms. The issue of interrelations between ruminations and positive and

negative consequences of trauma requires further exploration, including longitudinal research.

The present study has certain limitations. The negative and positive effects of traumatic events were assessed using self-report, which involves the risk of influence of the social desirability variable. Moreover, the Impact of Event Scale is only an instrument assessing the symptoms of PTSD and does not yield a clinical diagnosis of this syndrome. The present study was limited to trauma caused by the experience of family violence. Other kinds of traumatic events that may have happened to the surveyed women, such as the death of a close relative or a serious, life-threatening illness, were not analyzed. The co-occurrence of traumatic events could influence the level of their effects, both positive and negative. The analysis was limited to current ruminations, not ruminations occurring immediately after the event. What is more, the study had a cross-sectional design, which does not make it legitimate to draw conclusions regarding causal relations.

Despite these limitations, the obtained results contribute new information about the mechanisms underlying negative and positive consequences of the experience of traumatic events. They also indicate that even the experience of very strong trauma can be associated with positive effects.

The results of the present study can be used in practice as well as inspire further explorations, particularly regarding the association of ruminations with the individual's personal resources and coping strategies.

REFERENCES

- Act of July 29, 2005, on counteracting domestic violence, *Dziennik Ustaw [Journal of Laws]* no. 180, item 1493. Retrieved from: isap.sejm.gov.pl/DetailsServlet?id=WDU20051801493
- APA, American Psychological Association (2013). DSM-V. <http://dx.doi.org/10.1176/appi.books.9780890425596>
- Boyratz, G., & Efsthathiou, N. (2011). Self-focused attention, meaning, and posttraumatic growth: The mediating role of positive and negative affect for bereaved women. *Journal of Loss and Trauma, 16*(3), 13-32.
- Calhoun, L. G, Cann, A., & Tedeschi, R. G. (2010). The posttraumatic growth model: Sociocultural considerations. In T. Weiss & R. Berger (Eds.), *Posttraumatic growth and culturally competent practice* (pp. 1-14). Hoboken, NJ: John Wiley & Sons.
- Cann, A., Calhoun, L. G., Tedeschi, R. G., Triplett, K. N., Vishnevsky, T., & Lindstrom, C. M. (2011). Assessing posttraumatic cognitive processes: The Event Related Rumination Inventory. *Anxiety, Stress & Coping, 24*(2), 137-156.
- CBOS, Center for Public Opinion Research (2012). *Violence and conflicts at home*. Retrieved from: www.cbos.pl/Spiskom.Pol/2012/K_082_12

- Chan, M. W., Ho, S. M., Tedeschi, R. G., & Leung, C. W. (2011). The valence of attentional bias and cancer-related rumination in posttraumatic stress and posttraumatic growth among women with breast cancer. *Psycho-Oncology*, 20, 544-552.
- Cobb, A. R., Tedeschi, R. G., & Cann, A. (2006). Correlates of posttraumatic growth in survivors of intimate partner violence. *Journal of Traumatic Stress*, 19(6), 895-903.
- Dąbkowska, M. (2006). Wpływ traumatycznych doświadczeń na zdrowie psychiczne dzieci i młodzieży. *Psychiatria w Praktyce Ogólnolekarskiej*, 4(6), 161-164.
- Dąbkowska, M. (2009). Zaburzenia stresowe pourazowe u kobiet jako wynik przemocy ze strony partnera. *Alkoholizm i Narkomania*, 22(1), 11-20.
- Draucker, C. B. (2001). Learning the harsh realities of life: Sexual violence, disillusionment, and meaning. *Health Care for Women International*, 22, 67-84.
- Dudek, B. (2003). *Zaburzenie po stresie traumatycznym*. Gdańsk: Gdańskie Wydawnictwo Psychologiczne.
- Ehring, T., & Ehlers, A. (2014). Does rumination mediate the relationship between emotion regulation ability and posttraumatic stress disorder? *Psychotraumatology*, 26(5). DOI: org/10.3402/ejpt.v.23547
- Gangstad, B., Norman, P., & Barton, J. (2009). Cognitive processing and posttraumatic growth after stroke. *Rehabilitation Psychology*, 54(1), 69-75.
- Helgeson, V., Reynolds, K., & Tomich, P. (2006). A meta-analytic review of benefit finding and growth. *Journal of Consulting and Clinical Psychology*, 74(5), 797-816.
- Juczyński, Z., & Ogińska-Bulik, N. (2009). Pomiar zaburzeń po stresie traumatycznym – polska wersja zrewidowanej Skali Wpływu Zdarzeń. *Psychiatria*, 6(1), 15-25.
- Lev-Wiesel, R., Amir, M., & Besser, A. (2005). Posttraumatic growth among female survivors of childhood sexual abuse in relation to the perpetrator identity. *Journal of Loss and Trauma*, 10(1), 7-17.
- McLean, C. P., Morris, S. H., Conklin, P., Jayawickreme, N., & Foa, E. B. (2014). Trauma characteristics and posttraumatic stress disorder among adolescent survivors of childhood sexual abuse. *Journal of Family Violence*, 29, 559-566.
- Michael, T., Halligan, S. L., Clark, D. M., & Ehlers, A. (2007). Rumination in posttraumatic stress disorder. *Depression and Anxiety*, 24(5), 307-317.
- Morris, B., & Shakespeare-Finch, J. (2011). Rumination, post-traumatic growth, and distress: structural equation modeling with cancer survivors. *Psycho-Oncology*, 20, 1176-1183.
- Nolen-Hoeksema, S. (2000). The role of rumination in depressive disorders and mixed depressive/anxiety symptoms. *Journal of Abnormal Psychology*, 109(3), 504-511.
- Ogińska-Bulik, N. (2010). Potraumatyczny rozwój w chorobie nowotworowej – rola prężności. *Polskie Forum Psychologiczne*, 15(2), 125-139.
- Ogińska-Bulik, N. (2013). Wzrost po traumie związanej z doświadczaniem przemocy w rodzinie u dzieci i ich matek. *Pedagogika Rodziny*, 3(4), 89-100.
- Ogińska-Bulik, N. (2015). *Dwa oblicza traumy. Negatywne i pozytywne skutki zdarzeń traumatycznych u pracowników służb ratowniczych*. Warsaw, PL: Wydawnictwo Difin.
- Ogińska-Bulik, N. (2016). Ruminacje a negatywne i pozytywne skutki traumy u zakażonych HIV. *Psychiatria*, 13(1), 8-16.
- Ogińska-Bulik, N., & Juczyński, Z. (2010). Rozwój potraumatyczny – charakterystyka i pomiar. *Psychiatria*, 7(4), 129-142.

- Ogińska-Bulik, N., & Juczyński, Z. (2015). Inwentarz Ruminacji o Negatywnym Zdarzeniu – polska adaptacja *the Event Related Rumination Inventory*. *Przegląd Psychologiczny*, 58(3), 383-400.
- Senter, K. E., & Caldwell, K. (2002). Spirituality and the maintenance of change: A phenomenological study of women who leave abusive relationships. *Contemporary Family Therapy*, 24, 543-564.
- Shakespeare-Finch, J., & Lurie-Beck, J. (2014). A meta-analytic clarification of the relationship between posttraumatic growth and symptoms of posttraumatic distress disorder. *Journal of Anxiety Disorders*, 28(2), 223-229. DOI: 10.1016/j.janxdis.2013.10.005.
- Statystyka.policja.pl/wybrane statystyki.
- Tedeschi, R. G., & Calhoun, L. G. (1996). The Post-Traumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress*, 9(3), 455-471.
- Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry*, 15, 1-8.