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#### Review of PhD thesis

*pt. The role of positive and negative posttraumatic cognitive processing in predicting the effects of trauma. Qualitative and quantitative analysis of the narratives of trauma survivors.*

prepared by Wiktoria Mieleszczenko-Kowszewicz, MA,  
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The main goal of the doctoral dissertation of Mrs. Wiktoria Mieleszczenko-Kowszewicz, MA, was to explore the impact of two types of cognitive processing of trauma – positive and negative – on the development of posttraumatic stress disorder (PTSD), posttraumatic deprecation (PTD) and posttraumatic growth (PTG). The PhD candidate conducted two types of studies. The aim of the first one, i.e. longitudinal was to recognize a specific type of cognitive processing of trauma and its consequences after the first few months following the traumatic event. It should be underlined that quantitative analysis of the interview's content involved a novel method namely natural language processing (NLP) tools used for counting words' meanings within narratives, predicting PTSD, PTG, and PTD. Additionally, qualitative analysis was conducted by raters to identify cognitive emotion regulation strategies in the narratives. The second study employed a cross-sectional design, aiming to determine the relationship between posttraumatic cognitive processing and PTSD symptom severity. Participants described their traumatic experiences, and their PTSD symptoms were assessed using the SCID-I. An additional objective of this study was to verify the agreement between the algorithm and raters.

The findings of the PhD dissertation highlight the need for dividing cognitive processing into two separate ones that predict different posttraumatic readaptations. Positive cognitive processing of trauma (PCPT) negatively predicts PTSD and positively predicts PTG, whereas negative cognitive processing of trauma predicts both PTSD and PTD. The qualitative narrative's analysis confirmed that NCPT does not appear alone in the content of the story, however PCPT is present. The type of posttraumatic cognitive processing can be identified during interviews with trauma survivors. Quantitative narrative analysis with four newly created word meaning categories was conducted, but only exaggeration predicted PTSD. Moreover, the algorithm verification revealed that human raters are more accurate in recognizing word meanings within narratives, underscoring the need to avoid depending only on algorithms, which, by the way, is one of the most interesting results of this dissertation.

At the very beginning of this review, I would like to highlight a few strong points of this dissertation. First, I was impressed by the work that the author devoted to the implementation of this research project and conducting such a complex study. Conducting longitudinal studies, especially in the field of psychotraumatology is still relatively scarce, not only at the stage of PhD, but among researchers in Poland in general. Second, I admire searching for research gaps in the field of trauma and PTSD. Specifically, the concept of PTG is still relatively understudied, not to mention its reverse reflection in the form of PTD, which paradoxically can be experienced in the same domain as in PTG. Third, I want to underline the precise formal elegance of this dissertation and care for the reader in that regard. However, as a reviewer, I am forced to pay attention to the weaknesses of this dissertation, which I do below, commenting on individual parts of this doctoral dissertation.

Despite an encouraging title, I was confused by the long and little informative abstract, which did not help me to get the main aim of this dissertation. Specifically, the abstract did not follow the standard pattern of presenting (in a clear way) the background, method, main findings, and general conclusion. This kind of conceptual chaos and problems with the logical structuring of the arguments in this dissertation (or academic writing in general) can be encountered also in its next parts. For example, in subsection 1.1 the author begins with the arbitrary selection of trauma definitions by Zawadzki and Strelau (2008) or Wheaton and Montazer (2010) instead of starting from the presentation of a historic summary of trauma operationalisations in the following edition of Diagnostic and Statistical Manual of Mental Disorders (DSM) or International Classification of Diseases (ICD). Although Mrs. Mieleszczenko-Kowszewicz discussed further these classifications, she did it in a very short and superficial manner (e.g. it would be a good idea to include some table summarizing the definitions of trauma and PTSD diagnosis in DSM and/or ICD). After that, the PhD student highlighted other definitions of trauma, i.e. by Terr (1991) and Janoff-Bulman (1992), but the reader does not get the justification for why these particular authors were cited here. Moreover, subsection 1.2 on a very important issue, i.e. the prevalence of trauma and PTSD in society, is even shorter and devoided of a thorough literature review than the previous subsection. I do not understand why the author chose these *individual* and relatively out-of-date studies and did not follow recent reviews and metanalyses on this subject?

In the second chapter, I found analogous drawbacks in structuring the paragraphs of this thesis (not to mention the fact that it would be a good idea to start new chapters from the new page of the thesis). First, I was astonished why it begins with the subtitle "Long-term Consequences of Trauma" – the author did not study e.g. historic or transgenerational trauma, so what does it mean? The reader encounters here also the problem of lack of chronology of discussed studies (also the problem of basing not on primary, but secondary sources). The following paragraphs do not create a "coherent story", but sometimes a set of unrelated remarks on the general topic of PTSD. Surprisingly the cognitive perspective on PTSD is also discussed here, instead of focusing on that issue in chapter 3. The next subsection on PTG does not provide a substantial introduction to this positive phenomenon in psychology, not to mention the lack of sufficient presentation of the concept of PTD and its relationship with PTG or PTSD. Again I cannot help feeling that the theoretical introduction was written in a rush and without a proper literature review and ~~its~~ analysis.

The aim of the third chapter was elaboration on cognitive coping strategies for stress management. Again, the title of this chapter does not cover its real content. In addition, the author also here did not provide a thorough literature review on the issue of stress coping. In particular, in the first paragraph, it is written that “coping strategies that can be divided into two commonly used categories: emotion-focused and problem-focused” – why Mrs Mieleszczenko-Kowszewicz did not mention e.g. meaning focused coping? Furthermore, the PhD student based on Garnefski classification of coping strategies, which may be divided into two types: (a) adaptive strategies that consist of positive refocusing, positive reappraisal, putting into perspective, refocusing on planning and acceptance and (b) less adaptive strategies containing rumination, self-blame, blaming others, and catastrophizing. This assumption is very controversial and constitutes a major problem of the whole dissertation in my opinion. More specifically, while there is still a general accepted consensus in stress coping literature that coping matters in the way people deal with adverse life events, little agreement has been reached on how to conceptualize, measure and classify different ways of coping (Cheng et al., 2014; Skinner et al., 2003). The term “coping” is not a unique, observable behavior, stable trait, or specific belief easy to report, but a dynamic, multidimensional construct, encompassing various actions, behaviors, emotions, and cognitions often used by the same person simultaneously (Gruszczyńska, 2015). In addition, for a long time, an increasing number of studies have pointed to a significant crisis of coping checklists, which are usually constructed on the basis of too narrow theory of coping, confound characteristics of individual and stressful situations, and contain items too general or too abstract for obtaining a comprehensive picture of coping in case of a particular stressor (Kato, 2013). So the arbitrary assumption that some coping strategies are “adaptive” or “maladaptive” stressed by the author is hard to defend, as it highly depends on the type of stressor, the particular person, his/her intra-interindividual resources, and many other things.

Cheng, C., Lau, H. & Chan, M. (2014). Coping flexibility and psychological adjustment to stressful life changes: A meta-analytic review. *Psychological Bulletin*, 140, 1582-1607. doi:10.1037/a0037913

Gruszczyńska, E., & Knoll, N. (2015). Meaning-focused coping, pain, and affect: A diary study of hospitalized women with rheumatoid arthritis. *Quality Of Life Research*, 24, 2873-2883. doi: 10.1007/s11136-015-1031-6

Kato, T. (2013). Frequently used coping scales: a meta-analysis. *Stress & Health*, 31, 315-323. doi: 10.1002/smi.2557

Skinner, E., Edge, K., Altman, J. & Sherwood, H. (2003). Searching for the structure of coping: a review and critique of category systems for classifying ways of coping. *Psychological Bulletin*, 129, 216-269. doi: 10.1037/0033-2909.129.2.216

The last two chapters in the introduction present methods of narrative analysis, including the author's own method of creating categories of words' meaning. These chapters are written in a coherent way with the proper structuring of the following paragraphs. Also, the literature review is thorough and presents not only secondary, but mainly primary sources. All in all, I do not have significant critical remarks about these chapters.

Part II of the dissertation starts with a presentation of the research aims and hypotheses. As the PhD student underlined, the aim of her research was to distinguish negative and positive cognitive processing of trauma and their impact on readaptation after a traumatic event. Another goal was to find the linguistic predictors of trauma readaptation in narrative content through the use of an innovative method of counting words' meanings. The research was conducted in two studies, one longitudinal and one cross-sectional, which were

divided into two parts with respect to the description of aims, hypotheses, and method sections. What was a little bit confusing (and what is related to my above-mentioned remark on the author's assumption on adaptive vs. maladaptive coping strategies) was a large number of hypotheses and their too general, not specific, or even vague character. For example, why does the PhD student highlights in one hypothesis that some aspects of cognitive processing are predictors of, e.g., PTSD, and in other places that they are a negative predictor of this disorder?

Regarding the method of the first study, I was astonished that the PhD student recruited such sensitive a research sample (people after traumatic events) via Facebook. Although the author wrote that the interview was carried out by a psychologist, I had problems with its some parts. For example, it could be a high emotional burden for participants to be asked: "Even if this recollection is unpleasant, I would appreciate your attempt to be as detailed and as honest as you can". Did the whole study receive ethical approval? Moreover, the PhD student did not report the reliability of the questionnaires used in her study. Finally, the main methodological issue with the two parts of the authors' studies deals with the heterogeneity of the research sample with respect to the type of experienced traumatic events, which, by the way, are not specified in the text (only in the second study there is information about the car accident). Thus, in the current situation, it is very difficult to draw some valid conclusion from these findings with respect to the link between cognitive functioning, PTSD, PTG, and PTD. What is more, I do not fully understand why the author assessed the PTSD level in the first measurement with the aid of PCL-5, and in the second with SCID? How in that situation there is a possibility to compare results between these two measurements? Lastly – I appreciate that the PhD student cited my person, however, I was not the author of the Polish adaptation of the tool used in this study, i.e. PCL-5, but only LEC-5 - see below:

Rzeszutek, M., Lis-Turlejska, M., Palich, H., Szumiał, S. (2018). The Polish adaptation of the Life Events Checklist (LEC-5) for PTSD criteria from DSM-5. *Psychiatria Polska*, 52(3), 499-510.  
<https://doi.org/10.12740/PP/OnlineFirst/69218>

As far as the results section, I was astonished by the multiplicity of simple regression models and the lack of comment about the validation of the regression assumptions in each of these models. Moreover, I am not sure why the author analyzed each of the coping strategies separately with respect to PTSD level, i.e. why she did not perform some kind of cluster or latent profile analysis to evaluate cognitive processing of trauma on the aggregate level of coping strategies? In addition, the author mentioned that PTSD symptoms were the explanatory variable assessed with the interview during the second measurement. So what is the status of the PTSD symptoms measured in the first stage of the study? Did the PhD student somehow control its level in the proposed models, also in the linguistic meaning analysis? Because as such the final conclusions from that part, i.e. that from all NCPT sub-strategies, only catastrophizing and rumination significantly predicted PTSD, maybe a little bit disappointing, as it does not bring any added value to the vast literature on the link between coping and PTSD.

The same analytic strategy was applied to the link between coping strategies and, respectively, PTD and PTG (additionally on page 84 there are probable typos in the results



description, instead of PTD the author writes about PTSD or even PTG). The limits of such a statistical approach, mentioned above, may be related to a similar problem with popular *so what question* to this part of the study and its findings. In other words, different methodological attitudes could shed much different light on this interesting data and it is a pity that the author did not apply it.

A much more interesting and innovative approach was carried out in the qualitative part to determine whether and to what extent trauma victims utilize various types of cognitive processing of trauma while talking about their traumatic event. The results of this part showed that people after trauma may use NCPT more often while describing a traumatic event, which can be associated with the tension triggered by the story. At the same time, the results show that PCPT strategies are also used, which can be a sign that coping with trauma is a multidimensional process, where both, adaptive and maladaptive strategies are used to cope with the psychological burden of trauma.

The aim of the second study was to extend the interview instructions with questions about coping strategies and the psychological effects of the car accident. Individuals who did not meet this criterion were excluded from the study. The second goal was to verify of the algorithm's accuracy in the categorization of linguistic meanings by comparing the ratings made by algorithm with those performed by in the text evaluated by human raters. Overall the quantitative analysis did not bring substantial new data compared to the findings observed in the first stage of this project. On the contrary, the linguistic analysis provided interesting, yet null results pointing out even the relatively frequent words' meanings categories are not significant predictors of PTSD. What is most intriguing is that the algorithm verification revealed that human raters are more accurate in recognizing word meanings within narratives, underscoring the need to avoid depending only on algorithms. Instead, algorithms should be regarded as supplementary tools in such kind of data analysis.

The final part of the dissertation provided a discussion of the obtained results from the whole research project. The results from both studies validated the distinction of two types of cognitive processing of trauma, positive and negative, which each include specific cognitive emotion regulation strategies. Each type is activated after experiencing a traumatic event as a cognitive way of incorporating traumatic experience into existing cognitive patterns, which is important in terms of dealing with the traumatic event. Although the PhD student tried to discuss her results in light of classic and modern literature, which is appreciated, I feel that some conclusions are exaggerated. For example, I have doubts whether the findings of this study provided really new knowledge on how trauma survivors process trauma on the cognitive level. Thus, the author should be more cautious in drawing the practical, clinical implications from her study.

In conclusion, despite above-mentioned critical remarks, which should be answered during the defence of the PhD thesis, overall I feel that the doctoral dissertation of Mrs. Wiktoria Mieszczenko-Kowszewicz, in essence, **meets the conditions set out in the Act of August 30, 2018 on the title and academic degrees, and I apply to the Scientific Council, Institute of Psychology of the SWPS University of Social Sciences and Humanities, to further stages doctoral dissertation.**

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Warsaw, 20.07.2023

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