



Medical misdiagnosis exacerbates posttraumatic symptoms

Andreea Tamaian BSc., Bridget Klest PhD.

University of Regina, Regina SK, Canada



Social Context, Health and Trauma Lab
<http://uregina.ca/~schtlab/>

ABSTRACT

Feelings of betrayal have been shown to further intensify the deleterious effects of trauma (Martin et al., 2013). Individuals who have experienced extensive trauma tend to utilize the health care system more frequently (Bonomi et al., 2009). Medical errors are quite common (Kallberg et al., 2013), and a patient faced with a diagnostic error may experience feelings of mistrust with his physician and the medical system, which could ultimately lead the patient to experience increased psychological harm. Preliminary responses from individuals diagnosed with a cavernous malformation were analyzed. Multiple regression analyses indicated that posttraumatic symptoms were predicted by past traumatic events indicative of high betrayal and by experiencing delay in care after a medical misdiagnosis. Events indicative of low betrayal trauma did not significantly predict posttraumatic symptoms. After controlling for the effects of high betrayal trauma experiences, delay in care and misdiagnosis still significantly predicted posttraumatic symptoms. Therefore, experiencing one or more misdiagnoses before receiving a correct medical diagnosis of cavernous malformation and facing a delay in care predicts posttraumatic symptoms above and beyond the effects of previous betrayal trauma. Results are discussed in terms of the potential harm of institutional betrayal.

INTRODUCTION

Exposure to traumatic events increases risks of further revictimization, while feelings of betrayal during trauma exposure intensifies the effects of the trauma (Martin et al., 2013). The way in which trauma survivors appraise this experience predicts PTSD symptoms beyond the cumulative trauma exposure and cumulative level of betrayal (Martin et al., 2013). Betrayal trauma theory (Freyd, 1996) posits that individuals may experience feelings of institutional betrayal when an institution acts in a way that either betrays an individual's trust or fails to protect an individual whose well-being is dependent on that institution (Smith & Freyd, 2013). People experiencing recurring and extensive trauma utilize the health care system more frequently (Bonomi et al., 2009). Medical errors are quite common (Kallberg et al., 2013), and a patient faced with a diagnostic error may experience feelings of mistrust with his physician and the medical system, especially if he appraises the situation as creating more harm. This could ultimately lead the patient to experience increased psychological harm.

CURRENT RESEARCH

The current research investigates whether misdiagnosis and patient appraisals of trauma predict PTSD symptoms above and beyond the cumulative effects of betrayal trauma.

METHODS

• Participants:

- A total of 272 patients with cavernous malformation participated in an online survey.
 - 68.8% from United States, 9.9% from United Kingdom, 8.5% from Canada, and the remaining from 22 other countries.
- Majority of participants were female (73%), 25% male and 2% did not specify their gender.
- Participants ranged in age from 18 to 77 years old, and the average age was 44.35 ($SD=11.71$).
- Majority of participants were white (87.1%).
- The median household income was \$60,000-\$69,000 per year (ranging from less than \$10,000 to more than \$150,000).
- 25.7% of participants held a graduate or professional degree, 27.2% a bachelor's degree or equivalent, and only 1.5% less than a high school diploma.

• Measures:

- PTSD Checklist 5 (PCL-5; Weathers et al., 2013), Brief Betrayal Trauma Survey (BBTS; Goldberg & Freyd, 2006)

• Analyses:

- Direct entry multiple regression analyses were conducted to determine whether misdiagnosis predicts PTSD symptoms above and beyond overall experiences of betrayal trauma
 - Misdiagnosis status, high betrayal trauma and low betrayal trauma were predictors in one analysis.
 - Misdiagnosis and delay in care, high betrayal trauma and low betrayal trauma were predictors in the second analysis.

RESULTS

- Approximately half of participants (49.4%) indicated that they had been misdiagnosed with another condition prior to receiving a correct diagnosis of cavernous malformation.
 - 42.3% reported that they had at some point experienced a delay in medical care due to factors such as wrong diagnosis, a provider being unavailable, or financial or medical system barriers.
 - Of these, 64.6% indicated that they believe this delay in care resulted in new or worsening symptoms.
- Individuals who experience misdiagnosis plus delay in care are more likely to view having a cavernous malformation as traumatic ($\chi^2=16.513, p<.001$).
- A direct entry multiple regression analysis revealed that after controlling for previous instances of betrayal trauma, being misdiagnosed before receiving a correct diagnosis of cavernous malformation did not significantly predict posttraumatic symptoms (see [table 1](#)).
- However, after controlling for previous instances of betrayal trauma, being misdiagnosed and experiencing a delay in care significantly predicted current posttraumatic symptoms (see [table 2](#)).

Table 1. Misdiagnosis status and posttraumatic symptoms

Outcome	Predictors				
			High betrayal trauma	Low betrayal trauma	Misdiagnosis status
	<i>R</i>	<i>F</i>	<i>Semi-partial correlations</i>		
Posttraumatic symptoms	.441	16.732**	.303**	.110	.091

Table 2. Misdiagnosis, delay in care, and posttraumatic symptoms

Outcome	Predictors				
			High betrayal trauma	Low betrayal trauma	Misdiagnosis and delay in care
	<i>R</i>	<i>F</i>	<i>Semi-partial correlations</i>		
Posttraumatic symptoms	.450	17.392**	.295**	.097	.125*

** $p<.001$, * $p<.05$

DISCUSSION

- Individuals who were misdiagnosed before receiving a correct diagnosis of cavernous malformation experienced more posttraumatic symptoms beyond the effects of previous betrayal trauma when the misdiagnosis results in a delay of care.
- Patients' appraisals of the effect of the misdiagnosis affects how the event is construed and ultimately directly predicts PTSD symptoms (Martin et al., 2013).
 - Thus, misdiagnosis only affects psychological outcomes if patients are aware of the consequences of this, or perceive the misdiagnosis to have a direct consequence on their physical well-being.
- Betrayal trauma theory (Freyd, 1996) states that abuse is more harmful when a person or institution a person depends on violates the victim's trust (Smith & Freyd, 2014).
 - In the present study, participants who feel that their physician's actions (i.e., misdiagnosis) violated their trust with the system and ultimately negatively affected their physical well-being appear to suffer from elevated levels of PTSD symptoms above and beyond other past instances of high betrayal trauma.

FUTURE DIRECTIONS

Future directions for research may involve a direct assessment of feelings of institutional betrayal towards the medical system for individuals who have been misdiagnosed before receiving a correct diagnosis or who have experienced other medical errors. An investigation of the direct effects of institutional betrayal on the psychological well-being of medical patients could provide an important direction for change in the interaction of medical professionals with patients. Lastly, participants' perceptions of what exactly leads to feelings of institutional betrayal is pivotal in this area of research.