Secondary Traumatic Stress and Irrational Beliefs in Medical Students Seen as Premises of Sensitivity to Therapy Training

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Abstract

Secondary traumatic stress is prevalent among medical workers. Frequent interaction with victims of traumatic events starts in medical school, exposing students to the risk of secondary traumatic stress. The purpose of the present study was to assess the relation between secondary traumatic stress and irrational beliefs in medical students. 168 medical students were surveyed to assess secondary traumatic stress and irrational beliefs in various domains. Results show that almost half of students present a high level of irrational beliefs. The scales with the highest scores are the irrational need for achievement and the absolute need for justice. Irrational beliefs are significantly associated to secondary traumatic stress in medical students. Fortunately, studies show irrational beliefs can be challenged and changed with proper training. A more adapted way of thinking would benefit future doctors and their patients.

Keywords: Secondary traumatic stress; medical students; irrational attitudes

1. Introduction

Traumatic stress has been described in literary works for centuries (Birnes et al., 2003) but the traumatology field only developed in the past few decades. Secondary traumatic stress is one of the recently described concepts. A growing body of research shows that posttraumatic stress can be contagious. People who systematically interact with victims of traumatic events are at risk of developing traumatic symptoms themselves (Joinson, 1992, Figley, 1993,

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Hodgkinson & Shepherd, 1994, Pearlman & Maclan, 1995, Steed & Bicknell, 2001). They become secondary victims suffering of secondary traumatic stress. Symptoms are similar to those described in the posttraumatic stress disorder: intrusive thoughts, avoidance, arousal, distress (Figley, 1995). Some professional categories present a higher risk because of their frequent contact with victims of traumatic events: psychotherapists, social workers, health professionals. Medical students start clinical internships early during their training and are exposed to different patients and pathologies. A life threatening diagnosis can determine posttraumatic stress disorder (Pujol et al., 2013). Consequently, medical students are also at risk of secondary traumatic stress.

Traumatic events tend to shake a person’s essential beliefs about a safe, fair world, isolating the victim in an existential crisis (Janoff-Bulman, 1992, Herman, 1992). The invulnerability illusion protecting the person from stress and anxiety is shattered; feelings of self-worth and trust in others are questioned (Janoff-Bulman, 1992). Victims face the challenge of reconciling their previous beliefs and the realities of the traumatic event. Recovery will depend on the person’s ability to resolve the discrepancy. Dysfunctional, irrational beliefs about the world, self and others might have a negative impact on posttraumatic adjustment. McCann and Pearlman (1990) describe seven central human values vulnerable to traumatic stress: security, trust, respect, intimacy, power, independence and frame of reference.

The present study aims to investigate the relationship between irrational beliefs and secondary traumatic stress in medical students. Clarifying this relationship could be part of the solution in intervention and prevention efforts.

2. Method

168 students from the Faculty of Medicine in Iasi took part in this study. Students’ age ranged between 19 and 27 with an average of 22.4. The study took place at the beginning of the second semester to make sure the third year can fit the clinical years. Students start clinical training during the first semester in the third year. In order to observe the presence of STS among medical students, we also used a control group formed from 60 pharmacists. All participants answered a set of questionnaires. All the scales were edited in the program Unipark the Academic Online Research Network. The link to the online questionnaires was emailed to the medical students’ yahoo groups for each year. The Impact of Events Scale (IES) (Horowitz, Wilner, & Alvarez, 1979) initially measured symptoms of direct trauma and not of secondary trauma. In spite its original purpose, the scale is most frequently used to measure and survey secondary traumatic stress symptoms. It has two subscales that measure avoidance with 8 items (α = .71) and intrusion with 7 items (α = .89) and can be added to generate a total score (α = .84). The General Attitudes and Beliefs Scale Short Form (David, 2006) adapted by Bianca Macovei was used to measure dysfunctional beliefs. Its 26 items are divided in 7 subscales: rationality (α = .55), self worth global assessment (α = .52), need for achievement (α = .69), need for approval (α = .60), need for comfort (α = .50), the absolutist demand for justice (α = .52) and global assessment of others (α = .61). The last six subscales can be added to generate a total score of dysfunctional beliefs (α = .83).

3. Results

We firstly conducted a qualitative analysis to assess students’ levels of irrational beliefs. We compared our samples’ results to the standard cited in David (2006). Students show average scores compared to the Romanian standard, except for the need for achievement where they enter the high score limit (M = 14.30, SD = 3.33). However, a more detailed analysis shows an important percent of medical students report high scores in irrational beliefs on different subscales. Around 20% of students show high and very high irrationality in personal self worth assessment and in their need for approval. 10% show a high and very high need for comfort and share high levels of irrational beliefs regarding the global assessment of others. 30% have a high and very high need for justice. 45% report high and very high scores in total irrationality.

Results show weak significant associations between irrational beliefs and secondary traumatic stress symptoms. Rational thinking is associated to lower levels of intrusive and avoidance symptoms. The only subscales which don’t show significant correlations to secondary traumatic stress, avoidance or intrusion are the need for achievement and the absolutist demand for justice.
Table 1: Correlation results between irrational beliefs and STS symptoms

<table>
<thead>
<tr>
<th>Beliefs</th>
<th>Intrusive</th>
<th>Avoidance</th>
<th>Total STS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational</td>
<td>-.165*</td>
<td>-.174*</td>
<td>-.180*</td>
</tr>
<tr>
<td>Self worth</td>
<td>1.59*</td>
<td>2.18**</td>
<td>2.01**</td>
</tr>
<tr>
<td>Achievement</td>
<td>.130</td>
<td>.044</td>
<td>.091</td>
</tr>
<tr>
<td>Approval</td>
<td>.187*</td>
<td>.157*</td>
<td>.238*</td>
</tr>
<tr>
<td>Comfort</td>
<td>.196*</td>
<td>.238**</td>
<td>.231**</td>
</tr>
<tr>
<td>Justice</td>
<td>.035</td>
<td>-.030</td>
<td>.002</td>
</tr>
<tr>
<td>Others assessment</td>
<td>.184*</td>
<td>.176*</td>
<td>.191*</td>
</tr>
<tr>
<td>Irrational Total</td>
<td>.221**</td>
<td>.194*</td>
<td>.220**</td>
</tr>
</tbody>
</table>

Note: * = p ≤ .05, ** = p ≤ .01 N = 168 students for all analysis.

Regression results show irrational beliefs and rational thinking significantly predict 7% of the variance in total secondary traumatic stress. Intrusion and avoidance symptoms are predicted by high levels of irrational beliefs and low rationality.

Table 2: Regression results

<table>
<thead>
<tr>
<th></th>
<th>STS</th>
<th>Intrusion</th>
<th>Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ΔR²</td>
<td>β</td>
<td>ΔR²</td>
<td>B</td>
</tr>
<tr>
<td>Irrational beliefs</td>
<td>.04**</td>
<td>.22**</td>
<td>.04**</td>
</tr>
<tr>
<td>Rationality</td>
<td>.03**</td>
<td>-.19**</td>
<td>.03*</td>
</tr>
<tr>
<td>Total R²</td>
<td>.07**</td>
<td>.07**</td>
<td>.06**</td>
</tr>
</tbody>
</table>

Note: * = p ≤ .05, ** = p ≤ .01 N = 168 students for all analysis.

4. Discussions

As hypothesised, medical students with high level of irrational beliefs show higher levels of avoidance, intrusion and total secondary traumatic stress. On the other hand, rational thinking is associated to fewer symptoms. Rationality and irrationality don’t correlate with each other showing the complexity of beliefs and attitudes systems. Students are capable of formulating rational thoughts and attitudes while holding strong irrational beliefs.

The highest scores were reported for the need for achievement and the absolutist demand for justice. At the same time these two scales were the only ones that didn’t correlate to secondary traumatic stress symptoms. A high need for achievement could be explained by students’ youth and professional status. Respondents are at the beginning of their carriers, projecting their future, studying to accomplish their plans. Moreover, a selection bias might have caused the inflation in the scores to this subscale. Students voluntarily took part in the study. Those who chose to access the link and answer our scales showed interest in research, curiosity and open-mindedness. These traits are likely to correlate with ambition and higher need for achievement. Being future oriented, pragmatic, with a will to succeed might help students disengage more easily and treat patients as means to an end. This might explain the lack of correlation between secondary traumatic stress and the irrational need for achievement.

The absolutist need for justice prevalence is also explained by the choice of a medical career. Choosing to help those in need, to re-establish the balance and relieve the pain of the innocent is associated to the need for justice. However, the lack of correlation between the need for justice and secondary traumatic stress is not consistent with previous research. The universal belief in a just and meaningful world, where good things should happen to good people is constantly invalidated by the daily exposure to traumatic counter examples (Janoff-Bulman & Frieze,

Students who have dysfunctional expectations from themselves and the other, who have a high need for approval and comfort show high avoidance and intrusion symptoms as well as high total secondary traumatic stress. These beliefs are dynamically involved in social interaction and they influence students’ contact with the patients. Being very critical in assessing the others might also mean a lower number of friends and poor social support. Even if social support is offered, perfectionist persons, who hold irrational beliefs regarding their self worth, might not be able to benefit from it. All these factors contribute to raising vulnerability to secondary traumatic stress. The high need for comfort is expressed through the difficulty in dealing with tensed, frustrating situations. Patient suffering and exposure to trauma and disease might be difficult to handle for students with a high need for comfort.

Both irrational and rational thinking explain a significant percent of the variance in secondary traumatic stress symptoms. Romanian medical training does not include information about secondary traumatic stress. Medical students and medical staff have to find coping strategies on their own. Disengagement and avoidance are solutions that may harm the relationship with the patient and the treatment process. Caring and compassionate students will make the best physicians in the future but are also most vulnerable to secondary traumatic stress (Figley, 1995). Irrational beliefs can be challenged and changed with proper training. Cognitive behavioural techniques have proved their efficiency through multiple studies and they seem to be part of the solution in this context as well.

References


