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Short communication

Complex PTSD and intergenerational transmission of distress and resilience among Tutsi genocide survivors and their offspring: A preliminary report

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ABSTRACT

The research on survivors of genocide has focused on PTSD, but complex PTSD (CPTSD) and its potential effect on intergenerational transmission are understudied. This study assessed complex PTSD and resilience among Tutsi genocide survivors ($n = 60$, mean age = 52.27 [$SD = 6.27$]) and their offspring ($n = 60$, mean age = 21.21 [$SD = 1.78$]). Offspring of parents suffering from PTSD or CPTSD reported more secondary traumatization symptoms relative to offspring of parents without PTSD ($p < 0.0001$). Moreover, parental CPTSD was related to lower resilience among both survivors and offspring ($p < 0.0001$). The current findings suggest that parental CPTSD may have broader influences manifested in offspring lower resilience.

1. Introduction

The 1994 genocide against the Tutsi resulted in almost one million victims and mass destruction across Rwanda. In addition to the mass killing, rape and, other forms of physical and psychological violence and torture were committed (Prunier, 2009). Psychopathology, and especially post-traumatic stress disorder (PTSD), was documented to be exceptionally prevalent among the survivors of the genocide against the Tutsi (Pham et al., 2004). Reverberating findings on intergenerational transmission found among descendants of highly traumatized groups (Ben-Ezra et al., 2012; Danieli, 1998), most notably Holocaust survivors (Danieli et al., 2015; Shrira et al., 2017), the genocide in Rwanda has indirect effects. Initial evidence suggests that survivors' psychopathology has a substantial impact on offspring health (Rieder and Elbert, 2013; Perroud et al., 2014). Nonetheless, some survivors succeeded to compartmentalize their trauma and manifest resilience (Roth et al., 2014).

The research on survivors of the Tutsi genocide has focused on PTSD, but complex PTSD (CPTSD) and its potential intergenerational effect are understudied. According to the ICD-11 draft, CPTSD is associated with prolonged trauma, and requires fulfilling the PTSD criteria in addition to the fulfillment of three (impaired) self-organization clusters: affective dysregulation, negative self-concept, and disturbed relationships (Cloitre et al., 2013; Ben-Ezra et al., 2018). Indeed, CPTSD was found to be quite prevalent among survivors of massive trauma (Nickerson et al., 2016; Hoffman et al., 2018).

The current study assessed CPTSD among Tutsi genocide survivors and its intergenerational impact on offspring mental health. We hypothesized heightened intergenerational effects among survivors with CPTSD manifested by higher secondary traumatization and lower resilience among their offspring relative to offspring of parents with or without PTSD.

2. Methods

2.1. Participants and procedure

Sixty dyads of Tutsi genocide survivors and their offspring (born after the genocide) were interviewed by a trained social worker. Each dyad related to an independent family. Parents were selected based on availability and offspring were selected based on availability and their age. The study questionnaires (see below) were read in English in a personal interview setting, and when needed, explained in Kinyarwanda. Participants provided verbal informed consent to procedures approved by the ethics committee in Bar-Ilan University.

2.2. Measures

Participants reported background characteristics and exposure to genocide (see Results section). Participants were also asked whether they have experienced an extremely dangerous event not related to the genocide. Respondents further completed the 6-item ICD-11 PTSD

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($\alpha_{Parents}$ = 0.88 and $\alpha_{Offspring}$ = 0.85), and CPTSD (α = 0.91 for parents) questionnaires (Cloitre et al., 2013). Parents completed all symptoms while referring to the genocide. Offspring completed the PTSD items referring to symptoms they themselves have with regard to their parents' genocide trauma (i.e., secondary traumatization symptoms; e.g., "Did you have repeated disturbing dreams of your parents' experiences during the genocide against the Tutsi?"). Finally, all respondents completed the 10-item Connor–Davidson Resilience Scale (Campbell-Sills and Stein, 2007; $\alpha_{Parents}$ = 0.89 and $\alpha_{Offspring}$ = 0.88). We computed the sum of secondary traumatization symptoms and the mean of resilience items.

2.3. Data analysis

Following the proposed ICD-11 guidelines (Cloitre et al., 2013), we defined PTSD as endorsing at least one of two possible symptoms (rated ≥2, "moderately") from each of the three PTSD syndromes, i.e., re-experiencing, avoidance, and sense of threat (hyper-arousal). Likewise, CPTSD was diagnosed when, in addition to meeting criteria for PTSD, respondents exhibited disturbances in self-organization by suffering from all three self-organization syndromes; affective dysregulation, negative self-concept, and interpersonal problems (Cloitre et al., 2013). Similar to PTSD diagnosis, to fulfill criteria of disturbances in self-organization one need not endorse all six items; rather it was necessary to endorse at least one of two symptoms from each the three self-organization syndromes (rated ≥2). All those who neither met the criteria for CPTSD nor PTSD, were classified as "no-PTSD".

Group differences in background characteristics and genocide exposure level were tested with one-way ANOVA and Chi-square tests. Group difference in secondary traumatization and resilience were tested with one-way ANCOVA controlling for background characteristics found to significantly differ between the groups. Additional analyses accounted for parents' and offspring gender in order to assess possible gender effects on secondary traumatization and resilience.

3. Results

Twenty four parents (40.0%) did not have PTSD, 16 (26.7%) had PTSD, and 20 (33.3%) had CPTSD. Table 1 presents the group differences on the study variables.

Compared to the two other groups, parents with CPTSD had a higher percentage of women and lower percentage of participants who completed high school education. The parent groups did not differ in other background characteristics.

The parent groups did not differ in level of exposure to the genocide nor in the percentage of participants who underwent other traumatic events. When examining separate types of genocide exposure, 41.1% of the parents reported being injured, 89.8% reported seeing people being killed, 88.1% saw people wounded, and 67.8% and 91.7% had at least one family member who was injured or killed, respectively.

The offspring in the three groups did not differ in any of the background characteristics. All offspring were single and only one reported experiencing traumatic event.

Looking at cross-generation correlations, parental PTSD and CPTSD symptoms were related to offspring secondary traumatization (r = 0.40 and 0.44, p < 0.01, respectively). Parental and offspring resilience were positively related (r = 0.50, p < 0.0001).

Most importantly, offspring of parents with CPTSD and offspring of parents with PTSD reported higher secondary traumatization symptoms than offspring of parents without PTSD. Moreover, both parents with CPTSD and parents with PTSD reported lower resilience than parents without PTSD. Offspring of parents with CPTSD reported lower resilience compared to the two other groups. Controlling for parental gender and education, group differences remained significant (offspring secondary traumatization: F[2,54] = 3.58, p = 0.035, η_p^2 = 0.11; parental resilience: F[2,55] = 5.52, p = 0.007, η_p^2 = 0.16; offspring resilience: F[2,54] = 5.70, p = 0.006, η_p^2 = 0.17).

Additional analyses accounting for parents' and offspring gender compared father–son (n = 11), father–daughter (n = 5), mother–son (n = 21), and mother–daughter (n = 23) dyads. The dyad types did not show significant differences in offspring secondary traumatization (F[3,55] = 2.58, p = 0.06), parental resilience (F[3,56] = 1.60, p = 0.20) or offspring resilience (F[3,55] = 0.70, p = 0.55).

4. Discussion

Corroborating some of our hypotheses, we found heightened secondary traumatization symptoms among offspring of both parents suffering from PTSD or CPTSD compared to offspring of parents without PTSD. Moreover, parental CPTSD was related to lower resilience among both survivors and offspring.

Our findings add to prior evidence on the effects of the Tutsi genocide on survivors' (Pham et al., 2004) and offspring mental health (Rieder and Elbert, 2013; Perroud et al., 2014). More importantly, the current findings allude to the possibility that parental CPTSD may have broader influences manifested in offspring lower resilience. As lower

Table 1
Group differences in background characteristics and main study variables.

	Parents without PTSD	Parents with PTSD	Parents with CPTSD	Entire sample	Comparison test
n dyads	24	16	20	60	
Mean parents' age (SD)	53.08 (5.93)	52.50 (6.57)	51.15 (6.57)	52.27 (6.27)	$F(2,56) = 0.51, p = 0.60$
Parents' n women	13	12	19	44	$\chi^2(2) = 9.33, p = .009, V = 0.39$
Parents' n high school education	17	6	1	24	$\chi^2(2) = 19.75, p < 0.0001, V = 0.57$
Parents' n married	17	12	11	40	$\chi^2(2) = 1.91, p = 0.38$
Mean parents' no. of children (SD)	4.20 (1.50)	4.13 (1.68)	4.65 (1.72)	4.33 (1.61)	$F(2,56) = 0.56, p = 0.57$
Parents' n currently living in Rwanda	22	13	20	55	$\chi^2(2) = 4.09, p = 0.12$
Mean parents' genocide exposure (SD)	3.91 (1.01)	3.43 (1.45)	3.85 (1.34)	3.76 (1.25)	$F(2,57) = 0.76, p = .47$
Parents' exposed to other traumatic events (n)	3	2	6	11	$\chi^2(2) = 2.57, p = 0.27$
Mean offspring age (SD)	21.66 (1.60)	21.50 (1.89)	20.45 (1.73)	21.21 (1.78)	$F(2,57) = 2.99, p = 0.06$
Offspring n women	10	7	11	28	$\chi^2(2) = 0.85, p = 0.65$
Offspring n high school education	17	10	8	35	$\chi^2(2) = 4.44, p = 0.10$
Offspring n living in Rwanda	21	13	19	53	$\chi^2(2) = 3.58, p = .16$
Mean parents' resilience (SD)	3.47 (0.66)[a]	2.97 (0.57)[b]	2.54 (0.46)[b]	3.03 (0.70)	$F(2,57) = 14.06, p < 0.0001, \eta^2 = 0.33$
Mean offspring resilience (SD)	3.49 (0.64)[a]	3.62 (0.55)[a]	2.84 (0.46)[b]	3.31 (0.65)	$F(2,56) = 10.51, p < 0.0001, \eta^2 = 0.27$
Mean offspring secondary traumatization symptoms (SD)	1.91 (1.61)[a]	3.18 (2.10)[b]	4.57 (1.95)[b]	3.11 (2.15)	$F(2,56) = 10.81, p < 0.0001, \eta^2 = 0.27$

Note. CPTSD, Complex PTSD. All offspring were single and only one offspring reported experiencing traumatic event. Means that do not share letters significantly differ from each other in a post hoc Bonferroni test (p < 0.05).

resilience was found among both CPTSD parents and their offspring, and as resilience was associated cross-generationally, it is possible that parents transmitted self-perceptions, world assumptions and emotional expression to offspring (Shmotkin et al., 2011), especially with regard to perceived ability to withstand adverse circumstances. Therefore, parental CPTSD may be related to an intergenerational transmission of low stress tolerance previously found among descendants of survivors of other massive traumas (Shmotkin et al., 2011; Palgi et al., 2012).

Study limitations included a small convenience sample, mostly composed of women with low education level, symptoms based on self-report rather on psychiatric evaluation, lack of evaluation of physical and emotional closeness between parents and offspring or evaluation of other family relatives (i.e., the other parent and other offspring) and cross-sectional design. Future studies should assess larger samples, examining differential effect of paternal and maternal CPTSD, and looking at specific mechanisms connecting parental and offspring adaptation (Danieli et al., 2015).

Despite limitations, our preliminary findings highlight CPTSD as a rather frequent debilitating condition among Tutsi genocide survivors, and for the first time to the best of our knowledge, document CPTSD association with more severe responses among survivors' offspring.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.psychres.2018.11.040.

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