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# Trauma alleviation treatment for unaccompanied children after the Rwandan Genocide: a cautionary tale

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## Abstract

Tens of thousands of children were orphaned or separated from their parents by the 1994 Rwandan Genocide. Following an all too familiar practice in post-conflict societies, these children were placed in unaccompanied children's centres (UCCs) referred to as orphanages. Staff in a proportion of these centres received training in simple trauma alleviation methods as part of a program instituted by the United Nations Children's Fund (UNICEF) with Rwandan governmental ministries. This study examines whether children in UCCs with staff trained in these methods had lower levels of post-traumatic stress symptoms (PTSS) than children in UCCs staffed by individuals who, to the best of our knowledge, lacked any formal mental health training. Data for these analyses derived from a National Trauma Survey conducted by UNICEF (1995) that included sampling of children from UCCs. Ordinary least squares multiple regression analysis was used to evaluate the effect of staff training on levels of PTSS among children, controlling for relevant covariates. Overall PTSS scores did not differ between children in UCCs with and without staff training. However, avoidance/numbing and hypervigilance symptoms were significantly elevated among females in UCCs with trained staff as compared with UCCs with staff lacking this training. Whereas these findings might result from unmeasured confounding variables, they nonetheless underscore the importance of formal assessment of treatment safety and effectiveness before implementing interventions.

## KEY IMPLICATIONS FOR PRACTICE

- Community-based approaches using a training of trainers approach may not always be effective when treating severe psychopathology after large scale violence
- Humanitarian agencies must include rigorous monitoring and evaluation protocols as part of their intervention efforts
- Mental health interventions should be adapted to address gender differences in child responses to interventions

**Keywords:** Genocide, post-traumatic stress, unaccompanied children

## INTRODUCTION

An abundant literature documents that war and other forms of extreme violence exert detrimental effects on the psychosocial development and mental health of children and adolescents (Betancourt et al., 2012; Dimitry, 2012; Fazel, Reed, Panter-Brick, & Stein, 2012; Foster & Brooks-Gunn, 2015; Neugebauer et al., 2009). Studies from conflict-ridden regions in Asia, South America, and Africa demonstrate that children exposed to these experiences often exhibit symptoms of post-traumatic stress disorder (PTSD) as well as heightened levels of generalised anxiety and depression (Flink et al., 2012; Karam et al., 2014; McMullen, O'Callaghan, Richards,

Eakin, & Rafferty, 2012; Reed, Fazel, Jones, Panter-Brick, & Stein, 2012; Thabet, El-Buhaisi, & Vostanis, 2014; Winkler et al., 2015). Longitudinal research suggests that in the absence of ongoing conflict PTSD may decrease in severity over time; however, many children remain symptomatic months or even years later (Dyregrov, Gupta, Gjestad, &

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Mukanoheli, 2000; Punamäki, Palosaari, Diab, Peltonen, & Qouta, 2015; Thabet & Vostanis, 2000; Vervliet, Lammer-tyn, Broekaert, & Derluyn, 2014). In fact, several studies suggest that for some age groups symptomology may increase over time (Bonanno & Mancini, 2008; Fan, Long, Zhou, Zheng, & Liu, 2015; Neugebauer et al., 2014; Osofsky, Osofsky, Weems, King, & Hansel, 2015; Punamäki et al., 2015; Tam, Houlihan, & Melendez-Torres, 2015).

These findings have prompted efforts to create psychoso-cial interventions to reduce distress in children and ado-lescents affected by war (Bolton et al., 2007; O’Callaghan, McMullen, Shannon, Rafferty, & Black, 2013; O’Sullivan, Bosqui, & Shannon, 2016; Tol et al., 2012, 2014; Verdelli et al., 2008). However, reviews of uncontrolled and con-trolled trials of these interventions in post-conflict settings offer widely divergent findings (Jordans, Pigott, & Tol, 2016; Tol et al., 2011). Among randomised controlled trials (RCTs) of psychosocial interventions for symptoms of PTSD, a substantial proportion do not find a main effect of treatment (Jordans, Komproe, Tol, & Kohrt, 2010; Tol et al., 2014), while a few report an increase in post-traumatic stress symptoms (PTSS) among the experimental group as compared with the control group (Peltonen, Qouta, El Sarraj, & Punamäki, 2012). Furthermore, when effective treatment is confined to one gender, it is generally females who benefit from the intervention (Jordans et al., 2016). Negative treatment effects by gender, for example less symptom reduction among females in the experimental as compared with that in the control arm (Tol et al., 2012) have also been noted on a few but not many occasions.

In 1994–95, UNICEF Rwanda and the new Rwandan gov-ernment implemented the Trauma Recovery Programme (TRP), a nationwide effort aimed at helping children and caregivers cope with the psychological harm associated with the 1994 Genocide (Dyregrov et al., 2000; Gupta, 1996, 1999; Neugebauer et al., 2009) through the use of trauma counsellors trained in elementary psychosocial methods of trauma alleviation. At that time, a large number of unaccompanied children’s centres (UCCs) were actively trying to provide residential care for orphans and other dispossessed children in the country. The staff of some but not all of these UCCs received trauma counsellor training, thereby creating a quasi-natural experiment for assessing the effectiveness of this specific psychosocial intervention.

## Historical background

From April to early July 1994 approximately 800,000 to 1 million Rwandans were slaughtered in a genocide perpe-trated by members of the Hutu majority against the Tutsi minority and moderate Hutu. Most victims were civilians killed by other civilians, by friends, neighbours, teachers, and even immediate family members. Tens of thousands of children saw their parents being killed, and/or were forcibly separated from their families for extended periods of time (Des Forges, 1999). Many of these children and adolescents, including a small proportion where both parents had sur-vived, were cared for in institutions known as UCCs. Typi-cally, UCCs did not establish formal admission criteria for the children to whom they offered protection and care. As a

consequence, some children, one or both of whose parents were alive, took up residence in UCCs, returning to their families briefly for major religious holidays.

Different non-governmental organisations (NGOs), includ-ing UNICEF and various religious and secular groups based mostly in Western Europe, maintained and funded these facilities. Each UCC was required to obtain official approval to operate in Rwanda from the government of Rwanda. However, there was no central governmental agency closely monitoring these institutions. Of note is that many of these organisations had a presence in Rwanda years before the Genocide.

UNICEF and the Rwandan Ministry of Rehabilitation and Social Integration established the TRP nationwide (Dyregrov et al., 2000; Gupta, 1996, 1999; UNICEF, 1995). As noted, TRP’s primary objective was to promote recovery for trau-matised children and families by training individuals and agencies in simple trauma alleviation methods using a decen-tralised, community-based approach referred to as the ‘train-ing of trainers’ (TOT) (Gupta, 1994, 1999). With regard to this initiative, UNICEF assembled a trauma team that trained 10 Rwandans with backgrounds in education, social work, and nursing to be regional trauma advisors. The Rwandans par-ticipating in the TOT programme were adults with at least a high school education, selected and hired by the UNICEF staff and/or by persons associated with the National Trauma Center. No effort was made to hire government employees.

These advisors were responsible for training Rwandan ‘social agents’, for example, teachers, health workers, NGO staff, religious leaders, caregivers at UCCs, to promote psychoso-cial adjustment and symptom reduction among war-affected children (Gupta, 1996, 1999; UNICEF, 1995). Trauma advi-sors conducted 6–8 hour workshops over 2–3 days to educate these social agents regarding: (1) normative child develop-ment; (2) the effects on children of separation, loss, and death of parents or other adults responsible for their care before the war; (3) and in basic counselling skills (Gupta, 1994). The principle goal of the intervention was to train social agents to provide guided group sessions to reduce posttraumatic stress reactions to the violence and loss of the Genocide. The didactic material on normal and abnormal child development aimed to increase the psychological knowledge base of social agents working with children and thereby improve their effectiveness in the group sessions. The trauma advisors attended regular staff meetings where they received support and supervision from the Ministry of Health (Gupta, 1999).

A typical programme plan recommended that counselling sessions guided by a single trained adult, be held for 2 hours a week for four or more weeks in succession. During the first session, the children discussed their lives before the conflict. At the following meeting, they were strongly urged to recount their experiences during the war, both the violence they had been exposed to and the feelings triggered by these experiences. At the third group session, the children were offered some explanation of the social and political origins of the war. In the final session, the children were asked to describe their hopes and expecta-tions for the future (UNICEF, 1995).

This programme was premised on the inability of post-traumatic stress reactions to resolve naturally, that is, without some type of external intervention. It assumes, as well, that the intervention must include the recollection and expression of the feelings associated with the trauma (Raundalen, 1995).

A major difference between UCCs with and without staff trained by the trainers is that the UCCs with such trained staff provided structured activities (namely discussions), organised into groups and focused directly for 2 hours on the trauma. All the children were strongly urged to participate in these groups, irrespective of the level of their symptomatology. While we have no specific details regarding the provision of psychological first aid in the other group of UCCs, there is no evidence that whatever comfort or care offered was rendered in such a regimented fashion.

By June 1995, trauma advisors had trained approximately 500 UCC staff, 1230 teachers, 425 NGO staff, 325 social assistant/health workers, and 100 religious leaders in trauma alleviation methods, totalling roughly 2580 social agents (UNICEF, 1995). The precise number of trained staff at each UCC was not recorded but was likely to vary considerably with the size of the facility.

In a separate effort to assess quantitatively the effects of war trauma on mental health, TRP staff together with UNICEF consultants designed and fielded the National Trauma Survey (NTS) between March and December 1995 (Dyregrov et al., 2000). The NTS measured exposure to trauma as well as PTSS in children who had experienced the Genocide, ( $N = 3030$ ) living either in UCCs or in the community. The training on how to guide trauma sessions was completed and in place at the start of the National Trauma Survey (March 1995). The exact date in March or later when these sessions were introduced into each of the UCCs is not available. However, no evidence suggests that there was any appreciable delay in implementation. The current paper focuses on children in the UCCs.

## METHODS

### Sampling

At the time of the NTS, Rwanda comprised 11 prefectures, subdivided into 154 communes, with a total of approximately 80 UCCs. The NTS aimed to recruit about 1500 children from UCCs, aged 8–19 years old, with a 1:1 gender ratio. Since lists of UCCs were incomplete, a sampling frame could not be defined. Furthermore, even if such lists existed and were employed, changing security concerns barring access to some regions of the country at any given time would have defeated a formal sampling scheme. Thirty-three UCCs were drawn from the 11 prefectures. Two UCC administrators declined to have their institutions participate; hence, 31 UCCs comprised the final sample. UCC administrators randomly sampled participants, working within the prescribed gender quota and age range.

The study protocol was approved by Rwandan government ministries and by UNICEF. Authorisation for the survey was

also obtained from headmasters in the UCCs. All potential children assented to participation. Four trained Rwandan female staff interviewed participants in a private setting for 30–40 minutes. Neither published reports nor typescript materials describe the specific pool of individuals from whom study interviewers were drawn. However, these individuals were probably selected from among the large social network of friends and acquaintances of UNICEF employees.

Interviewer training involved three 1-hour mock interview sessions with children other than those in the study sample. An experienced clinical psychologist from Norway, serving as a consultant to UNICEF, held weekly meetings with interviewers to ensure standardisation of procedures (Dyregrov et al., 2000). The current analyses of the data were authorised by UNICEF, subject to Institutional Review Board approval of New York State Psychiatric Institute, which exempted the study from review given the absence of identifying information (Neugebauer et al., 2009).

### Measures

The NTS interview measured trauma exposure using a Wartime Violence Checklist, and assessed PTSD symptoms using a structured checklist of Diagnostic and Statistical Manual of Mental Disorders – IV (DSM-IV) post-traumatic stress symptoms (PTSS Scale) (American Psychiatric Association, 1994). Demographic data, for example, participant age, gender, and years of formal education were also collected together with the UCCs status regarding the training of staff by the TRP. Questions concerning the respondent's ethnicity were excluded in light of the ethnic origins of the Genocide.

Interviewing commenced in May 1995 and concluded in December 1995. The NTS switched from an accidentally faulty version of the Rwandan PTSS Scale to the correct scale on August 23, 1995 (Neugebauer et al., 2009). Children who were administered the flawed version are excluded from current analyses, leaving a sample of 888 UCC participants from an initial total of 1484.

*Wartime Violence Checklist:* The Wartime Violence Checklist is a 28-item inventory of possible war experiences during the Genocide, adapted for the Rwandan context (Dyregrov et al., 2000). Binary responses are coded No (0) or Yes (1). Items include but are not limited to witnessing massacres, hiding under dead bodies, being physically injured. The responses are then tallied to provide a score for total exposure to traumatic events; maximum score possible is 28.

*PTSS Scale:* The Rwandan PTSS was based on the DSM-IV's B, C and D symptom criteria for PTSD (American Psychiatric Association, 1994). These criteria constitute re-experiencing symptoms, avoidance/numbing symptoms and hyperarousal symptoms. The symptoms comprising the Rwandan scale afford 94% coverage of DSM-IV PTSD symptoms (Neugebauer et al., 2009). (For the development of the measure, refer to Dyregrov et al., 2000.) The measure possessed satisfactory internal consistency (Cronbach's  $\alpha = 0.76$ ) and construct validity (Neugebauer et al., 2009).

## Statistical analyses

We anticipated that children residing in UCCs with staff trained in trauma alleviation methods would report lower PTSS, as compared with children in the other UCCs, in adjusted analyses.

Descriptive statistics summarise the sociodemographic characteristics of the sample. The distribution of UCCs with and without TRP training were compared on gender, age, education, exposure to violence, PTSS scores and the three cardinal symptom groups comprising PTSS using chi-square for categorical variables and analysis of variance for continuous variables. Next, the association of potentially confounding variables, for example, gender, age, and exposure to violence, and of the variable of interest, TRP training, with participants' PTSS scores was examined first using bivariate analyses, and then in analyses adjusting simultaneously for these potential confounders. We hypothesised *a priori* that younger age, lower education and greater degree of exposure to violence would be significantly related to greater PTSS symptoms; hence these variables are included in all models.

Since some previous studies of interventions for symptoms of PTSD have noted that treatment effects typically vary with subject gender, we decided *a priori* to examine this question in the current data. We tested this antecedent finding with a second order interaction term (Gender \* Staff Training Status). Finally, the foregoing analyses were repeated in exploratory fashion with PTSD Criteria B, C

and D serving as the outcome variable in three separate regressions. Statistical significance was set at  $p < 0.05$  two-tailed. Since the analyses pertaining to symptom clusters and modification of associations by gender were exploratory in nature, we opted not to introduce more stringent  $p$  values to adjust for multiple comparisons.

## RESULTS

Among all children in the study sample ( $N = 888$ ), 79.03% were below age 14 and 53.27% were male. The great majority had 0–3 years of education; 26.35% were living in UCCs where staff were recipients of the TRP training. Participants in UCCs with and without staff training differed significantly on gender distribution and school year,  $p < 0.05$ . No differences were found between the two groups of UCCs for age, level of exposure to violence, PTSS scores overall or for the individual symptom clusters [Table 1].

In bivariate analyses, females had significantly higher PTSS scores than males,  $p < 0.001$ . Neither age nor education was significantly associated with PTSS scores. Children living in UCCs with and without trained staff did not differ significantly by PTSS scores. (Results for bivariate analyses are not shown in tabular form.)

In a multiple regression analysis with all first-order terms in the model, only female gender and increasing exposure to wartime violence were significantly related to higher levels of PTSS [Table 2, Model 1]. As before, TRP training of staff was not associated with symptom levels. To explore whether gender modified the association between TRP training and

**Table 1: Comparison of study participants residing in UCCs with and without staff Trauma Recovery Programme training: Sociodemographic characteristics, mean exposure to violence, mean PTSS scores, and mean PTSS subgroup scores of participants**

Characteristic	Participants from UCCs with staff TRP training ( $N = 234$ )	Participants from UCCs without staff TRP training ( $N = 654$ )	Overall sample ( $N = 888$ )
Gender [ $N$ (%)]*			
Male	141 (60.26)	332 (50.76)	473 (53.27)
Female	93 (39.74)	322 (49.24)	415 (46.73)
Age groups <sup>a</sup> [ $N$ (%)]			
8–10 years	93 (39.91)	225 (34.40)	318 (35.85)
11–13 years	100 (42.92)	283 (43.27)	383 (43.18)
14–16 years	39 (16.74)	136 (20.80)	175 (19.73)
17–19 years	1 (0.43)	10 (1.53)	11 (1.24)
Education (number of years of schooling) <sup>a</sup> [ $N$ (%)]*			
0–3 years	166 (72.17)	396 (61.02)	562 (63.94)
4–6 years	62 (26.96)	248 (38.21)	310 (35.27)
7–9 years	2 (0.87)	5 (0.77)	7 (0.80)
Wartime exposure to violence			
Mean ( $SD$ ) <sup>a</sup>	16.29 (5.95)	15.71 (5.80)	15.87 (5.84)
Symptoms of post-traumatic stress			
Total mean ( $SD$ ) <sup>a</sup>	1.88 (0.83)	1.84 (0.74)	1.85 (0.76)
Re-experiencing mean ( $SD$ ) <sup>a</sup>	2.79 (1.73)	2.69 (1.73)	2.71 (1.73)
Avoidance/numbing mean ( $SD$ ) <sup>a</sup>	4.68 (2.02)	4.56 (1.71)	4.59 (1.79)
Hypervigilance mean ( $SD$ ) <sup>a</sup>	1.55 (1.38)	1.50 (1.41)	1.51 (1.40)

<sup>a</sup>Missing data. One participant lacked data on age, nine on education, 103 on exposure to violence, five on PTSS scores, one on re-experiencing scores, two on hypervigilance scores, and five on avoidance/numbing scores. \* $P < 0.05$ .

PTSS, the interaction term (Gender \* Staff Training Status) was added as a second-order term. There was no significant difference,  $p = 0.095$ , at the conventional level of statistical significance, between males and females on the effect of TRP staff training on overall symptom levels [Table 2, Model 2]. Three separate regression models were run for Criteria B, C and D symptom clusters as the dependent variable [Table 3].

There was no association between TRP training of staff and symptoms of re-experiencing, avoidance/numbing, or hypervigilance, thereby replicating results for the model with all PTSS combined. However, female gender was significantly associated with higher levels of re-experiencing and avoidance/numbing [Table 3]. To further explore this, the interaction term (Gender \* Staff Training Status) was added as a second-order term to each of the aforementioned models. The models showed that female gender modified the effect of TRP training on avoidance/numbing (interaction term,  $p = 0.038$ ) and hypervigilance (interaction term,  $p = 0.044$ ) scores respectively. Thus, females in UCCs with trained staff had higher levels of avoidance/numbing and hypervigilance scores than females in UCCs with untrained staff. No effect of gender on the association of TRP and re-experiencing scores was discerned. These findings are no longer statistically significant, once we adjust the level of statistical significance for the number of

exploratory analyses. (Results of this model with the interaction term are not shown in tabular format.)

## DISCUSSION

Study results confirm that greater trauma exposure is associated with more PTSS and that females report higher levels of PTSS symptoms compared to males, controlling for possible gender differences in age, level of education and traumatic exposure. These findings are consistent with an extensive literature on the 'dose-response' relationship between trauma exposure and PTSS, and heightened vulnerability of females to traumatic violence (Al-Hadethe, Hunt, Thomas, & Al-Qaysi, 2014; et al., 2014; Dell'Osso et al., 2013; Hourani, Williams, Bray, & Kandel, 2015; Jin, Xu, & Liu, 2014; Kolltveit et al., 2012). A rigorous exploration of the possible biological and/or psychosocial bases for this gender difference is long overdue but beyond the scope of the current investigation.

Against expectations, psychosocial care for traumatised children in UCCs did not affect their levels of PTSS overall. Nor were overall symptoms or clusters of cardinal symptoms reduced in subsamples of the population grouped by gender, age or other demographic or social variables. On the contrary, the intervention increased

**Table 2: Comparison of study participants residing in UCCs with and without staff Trauma Recovery Programme training: Regression models for PTSS scores with TRP training, female gender, age, education and exposure to violence as covariates**

	PTSS							
	Model 1				Model 2			
	B	S.E.	Beta	P-Value	B	S.E.	Beta	P-Value
TRP training	0.06	0.05	0.04	0.242	-0.01	0.07	-0.01	0.860
Female	0.13	0.05	0.09	<b>0.006</b>	0.09	0.06	0.06	0.128
Age 8–10 years	Reference				Reference			
Age 11–13 years	0.00	0.06	0.00	0.983	0.00	0.06	0.00	0.992
Age 14–16 years	-0.05	0.08	-0.03	0.507	-0.05	0.08	-0.03	0.558
Age 17–19 years	0.04	0.21	0.01	0.837	0.05	0.21	0.01	0.818
Education	0.01	0.02	0.02	0.649	0.01	0.02	0.02	0.627
Wartime exposure to violence	0.06	0.00	0.44	<b>0.000</b>	0.06	0.00	0.43	<b>0.000</b>
Gender* Staff Training Status					0.18	0.11	0.08	0.095 <sup>+</sup>

<sup>+</sup>The interaction term, while not achieving a conventional level of statistical significance, is noteworthy nonetheless. Bold values indicate statistical significance at  $P < .05$ .

**Table 3: Comparison of study participants residing in UCCs with and without staff Trauma Recovery Programme training: Regression models for re-experiencing, avoidance/numbing and hypervigilance scores with TRP training, female gender, age, education and exposure to violence as covariates**

	Re-experiencing				Avoidance/numbing				Hypervigilance			
	B	S.E.	Beta	P-Value	B	S.E.	Beta	P-Value	B	S.E.	Beta	P-Value
TRP training	0.18	0.12	0.05	0.144	0.10	0.14	0.03	0.477	0.15	0.11	0.05	0.175
Female	0.31	0.11	0.09	<b>0.006</b>	0.25	0.12	0.07	<b>0.043</b>	0.16	0.10	0.06	0.111
Age 8–10 years	Reference				Reference				Reference			
Age 11–13 years	-0.15	0.14	-0.04	0.286	0.22	0.15	0.06	0.148	0.01	0.12	0.00	0.919
Age 14–16 years	-0.18	0.18	-0.04	0.316	0.13	0.20	0.03	0.496	-0.12	0.16	-0.04	0.446
Age 17–19 years	0.37	0.49	0.03	0.45	-0.414	0.53	-0.03	0.433	0.42	0.42	0.04	0.324
Education	0.07	0.04	0.07	0.07	-0.030	0.04	-0.03	0.473	0.00	0.03	0.00	0.970
Wartime exposure to violence	0.12	0.01	0.42	<b>0.000</b>	0.093	0.01	0.31	<b>0.000</b>	0.06	0.01	0.27	<b>0.000</b>

Bold values indicate statistical significance at  $P < .05$ .

avoidance/numbing and hypervigilance symptomology among females. This pattern of findings – the absence of any overall benefit of psychosocial interventions with regards to PTSS and evidence of harm in specific sub-groups – is by no means new. On the contrary, RCTs have found numerous interventions for war-affected children to be ineffective or harmful (Bolton et al., 2007; Peltonen, Qouta, El Sarraj, & Punamäki, 2012; Tol et al., 2011, 2012, 2014).

Given the desperate, truly catastrophic circumstances under which the UNICEF consultants operated in 1994, necessitating quick selection of a potentially effective intervention and the absence of proof of concept for RCTs in such humanitarian crises, their rapid implementation of a particular approach to trauma alleviation is entirely understandable. Yet, the limited evidence of benefit and non-trivial evidence of harm for psychosocial interventions in post-conflict, humanitarian settings are now widely recognised in the scientific community. Nonetheless, the application of mental health interventions of untested effectiveness and safety continues unabated. While the current findings from a quasi-experimental setting are not novel, and the design itself lacks the rigor of RCTs, it has the advantage of offering evidence from a full scale-up in orphanages. (This intervention was also introduced into schools. However, trainers were not programmatically assigned to schools, thereby precluding parallel analyses in these community settings.) These findings, therefore, dramatically underscore the dangers of scaling up and incorporating these interventions into the recommendations from national ministries of health and mental health, absent any attention to effectiveness or safety.

Several mechanisms of varying likelihoods may explain these troubling findings. First, we do not know to what extent or even whether individual children in our sample were exposed to this psychosocial intervention. For those children reached by the intervention, we do not know at what stage they were assessed by the NTS. It is possible that children's symptoms may increase in some phases of an intervention while on balance reaching overall improvement or return to baseline levels at the conclusion.

The UCC staff were not randomly allocated to TRP training or to standard care. Therefore, we cannot exclude the possibility that the absence of a difference in PTSS levels between UCCs with and without TRP training results from highly systematic structural or staffing differences between the two groups of UCCs or from initial symptom level differences in the children placed in these UCCs. However, differences in gender, age, education, and exposure to violence between the two sets of UCCs are unlikely to explain our null results, since these variables are controlled for in the analyses.

While the trauma alleviation methods fielded by UNICEF were developed for children living under wartime conditions, the Rwandan Genocide has no parallel in modern

history with regards to the scale, pace and visibility of the horrors visited upon civilians. Furthermore, the violence was driven by a purpose different from that of most other conflicts, where the goal is often to achieve political dominance or to punish or seek revenge for a history of aggression. Rather, the goal in Rwanda was the extinction of an entire people. It is thus plausible that the trauma alleviation methods might have proved effective under less challenging or less catastrophic circumstances, as well as under more stable political and military conditions than that which prevailed in the early post-Genocide years. It is altogether possible that the methods or the personnel engaged in the training may simply have been overwhelmed by the magnitude of the challenge. We know from some studies, for example, that caregivers may well constitute a reservoir of PTSS that pass to the children they supervise (Hasanovic, Srabovic, Rašidovic, & Šehovic, 2009). Whereas this scenario would explain the absence of any differences in symptom levels between the UCCs with and without TRP training, it does not account for the greater distress in avoidance/numbing and hypervigilance symptoms for females in the UCCs where training was introduced. However, this evidence concerning harm lacks the authority of the null findings. This study was motivated by a single *a priori* hypothesis concerning the effectiveness of the intervention in reducing PTSS overall in the same as a whole. The analyses examining the effects of the intervention restricted by gender and by symptom cluster were exploratory in nature. If we adjust the necessary level of statistical significance for the number of exploratory analyses, the gender and symptom cluster specific results are not statistically significant. The possibility that this large scale nationwide effort was ineffective in achieving its goals of symptom relief, and may even have produced symptom increases in some groups, is not a unique finding. In fact previous RCTs have found various interventions for war-affected children to be unsuccessful or detrimental (Bolton et al., 2007; Tol et al., 2011, 2012, 2014).

Of note is that during this period, mental health resources in Rwanda were essentially non-existent anywhere, but in Kigali and even there, properly trained mental health professionals comprised a handful of individuals. Moreover, disturbed individuals would have to travel to Kigali, in the company of an older child or an adult, to receive treatment; a journey that was not affordable by the UCCs. There were a total of two psychiatrists in the entire country of 5.93 million people in 1995.

The evidence cited above and the results of the current observational study indicate that no intervention can be assumed to be either effective or harmless when it is introduced into a new type of critical setting or into a culture markedly different from the one in which it was developed. It is thus imperative to establish at the outset of humanitarian relief efforts, mechanisms for monitoring and evaluating the training process itself and for assessing the safety and effectiveness of the intervention (Inter-agency Standing Committee, IASC, 2017).

This study reinforces the need for close supervision and on-the-job instruction of staff to train them in care methods for children exposed to extremely traumatic events. Moreover, this work emphasises the importance of using relevant guidelines such as the Mental Health Gap Action Programme for trauma exposure to provide concrete recommendations to humanitarian actors supporting children suffering from post-traumatic stress (Tol, Barbui, & van Ommeren, 2013).

## Limitations

Given that this study was observational rather than experimental in nature, these findings regarding the negative effects only on symptoms of avoidance and hypervigilance among female children in UCCs that received TRP training must be interpreted with appropriate caution. Furthermore, appreciable baseline differences in PTSS levels between samples may have influenced and biased our findings. Lastly, since the NTS did not investigate symptoms of other psychopathologies that might have benefitted from this intervention, for example, depressive symptoms, panic and anxiety symptoms, conduct problems, feelings of isolation, hopelessness and so forth, the intervention may have produced sizeable but unmeasured benefits.

## CONCLUSIONS

Evidence is lacking that the treatment provided by UNICEF's Trauma Recovery Programme training lowered PTSS levels. Humanitarian agencies operating early in the wake of violence must make every possible effort to select an intervention from the extensive body of published scientific literature whose *safety* has been rigorously established.

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## Conflicts of interest

There are no conflicts of interest.

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