RESEARCH ARTICLE

Development and validation of the Clinical Aspects of Historical Trauma Questionnaire in Rwandan genocide survivors

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Abstract

Historical trauma is a relatively new concept in the literature, and investigations are needed to clarify its clinical aspects and develop instruments to measure its sequelae. The purpose of this study was to develop the Clinical Aspects of Historical Trauma Questionnaire (CAHTQ), which is meant to capture trauma sequelae in different contexts, and provide initial psychometric information. Participants were survivors of the genocide against the Tutsi in Rwanda ($N = 261$) aged 32–87 years ($M = 46.30$ years, $SD = 11.95$) who completed a preliminary version of the CAHTQ, constructed based on theoretical and content-related consideration, as well as the International Trauma Questionnaire, Fatalism Scale, Public Health Depression Questionnaire, Brief Coping Inventory, Forgiveness Questionnaire, and Sentiment of Reconciliation Questionnaire to test the discriminant and convergent validity of the CAHTQ. Exploratory factor analysis was conducted to reduce the number of items and extract factors; confirmatory factor analysis (CFA) was conducted to confirm the measure's dimensionality. The final questionnaire includes 20 items and five subscales. The items demonstrated good internal consistency, Cronbach's $\alpha = .91$, and the CFA demonstrated a very good fit of the model to the data, $\chi^2(60, N = 261) = 271$, CFI $= .963 = $, TLI $= .956$, SMRR $= .052$, RMSEA $= .052$. The CAHTQ was developed to capture the clinical aspects of historical trauma sequelae. Unlike comparable previously developed instruments, this questionnaire can be used for various historical traumas globally, and its suitability for this purpose will be the focus of future studies.

Historical trauma is a concept used by psychologists, social workers, and historians to reflect the cumulative, complex, and collective trauma experienced over time and across generations by a group of people who share an identity, affiliation, or circumstance (Brave Heart & DeBruyn, 1998; Evans-Campbell, 2008; Hartmann & Gone, 2014; Kirmayer et al., 2014). Recently, historical trauma has been defined as psychological and emotional injuries across generations resulting from cumulative traumatic experiences or events. Clinically, it is manifested by unresolved symptoms of grief, mistrust, exhaustion feelings, feelings of dignity degradation, culture-related syndromes, and the inseparability of past traumatic experience and current health problems within a group that shares similar social,

historical, and cultural characteristics (Mutuyimana & Maercker, 2021, p.4).

The concept of historical trauma was originally introduced to describe how psychological and emotional trauma manifest themselves within generations of Indigenous Americans (Brave Heart, 1999) and children of holocaust survivors (Kellermann, 2001). Nevertheless, in the last two decades, the historical trauma framework has been applied to many other cultural groups and communities that share a history of oppression, victimization, or massive group trauma, such as African Americans, Armenian refugees, Cambodians, Mexican Americans, and Russians (Mohatt et al., 2014). In these populations, researchers have found trauma-related symptoms, such as suicidality, substance abuse, depression, guilt, aggressive behavior, heart disease, hypertension, and impaired mental health (Brave Heart, 2003; Guenzel & Struwe, 2020). These symptoms, which are recognized as responses to historical trauma (Brave Heart, 2003), create a trauma cycle that destroys families and communities, and they are likely explained by cultural factors (Guenzel & Struwe, 2020).

Historical trauma responses have the characteristics of being collective, coercive, cumulative, and intergenerational (Hartmann & Gone, 2014). Using these symptom characteristics, researchers have shown that the standard diagnosis of posttraumatic stress disorder (PTSD) is inadequate to fully capture the suffering of survivors, and their offspring, of massive and genocidal trauma (Brave Heart, 2003). The conventional PTSD criteria outlined in the *Diagnostic and Statistical Manual of Mental Disorders* (fifth ed.; *DSM-5*; American Psychiatric Association [APA], 2013) and International Statistical Classification of Diseases (11th rev.; *ICD-11*; World Health Organization [WHO], 2019) are exclusively individual-centric without consideration of family, community, and cultural perspectives and the legacy of trauma across generations (Evans-Campbell, 2008; Maercker & Hecker, 2016). Similarly, research in Native American populations has shown that PTSD assessment instruments are not designed to capture the comprehensive broader clinical aspects of historical trauma and may have cultural biases (Brave Heart, 2003). As a result, researchers have begun to develop culturally appropriate tools for assessing the consequences of historical trauma.

To address this issue, Whitbeck, Adams, et al. (2004) developed the Historical Loss Scale (HLS) and the Historical Loss and Associated Symptoms Scale (HLAS). These tools have advanced the field of historical trauma in terms of empirical evidence of a link between the trauma associated with a collective historical past and the emotional experiences reinforced by cumulative trauma (Brave Heart, 2003). The HLS captures the frequency with which individuals think about historically traumatic events and

losses, whereas the HLAS is designed to capture emotional responses to these losses (Whitbeck, Adams, et al., 2004). The HLS and HLAS have been used in several Native American tribal groups to improve knowledge of the prevalence of historical trauma and responses to historical trauma (Brave Heart, 2003). Recently, the Historical Oppression Scale (HOS; McKinley et al., 2020) was introduced to assess internalized and externalized oppression in the form of historical injustice in Indigenous Americans. Taken together, these measurements were driven primarily by Indigenous Peoples of the Americas and are focused primarily on symptoms related to loss. However, there is a need to develop historical trauma measurements that can be used in other populations that have experienced man-made trauma and genocide, such as Rwandans, to focus on the clinical outcomes of historical trauma.

In addition to developing tools meant to assess historical trauma, researchers have shed light on the clinical aspects of historical trauma. The first clinical aspect mentioned by various authors is sadness or despair about cultural losses (Brave Heart, 1999, Gone, 2013; Sotero, 2006; Whitbeck, Chen, et al., 2004). Survivors of historical trauma repeatedly report that alterations of family and community functioning they have experienced in the aftermath of traumatic events reflect a loss of their culture (Somasundaram, 2007). Cultural losses include the loss of traditional values and traditional rites, as well as the impairment of family cohesion (Evans-Campbell, 2008; Grant, 2010). These losses create a feeling of despair, which is associated with stress, psychological problems, and identity conflicts in survivors of historical trauma, such as Indigenous groups (Allen et al., 2014; Wexler, 2009). Higher community suicide rates have been associated with a lack of cultural continuity, whereas lower rates have been associated with efforts to revitalize community culture (Chandler & Lalonde, 1998). The loss of Indigenous culture, language, and ceremonies has been shown to be accompanied by intergenerational disruptions in child-rearing and the creation of a legacy of distress among Indigenous peoples (Corrado & Cohen, 2003).

The second clinical aspect of historical trauma refers to a psychological inability to cope with stressors, presumably due to their cumulative nature. Survivors of cumulative traumatic events are often unable to function as they did before the onset of trauma. These individuals may withdraw socially, feel that their dignity has been violated, have difficulty with intimate relationships, become irritable, and lack motivation to work or be active (Doney, 1998; Somasundaram, 2007). Consequently, survivors often report unresolved grief, feelings of worthlessness, survivor guilt, psychological numbing, anxiety, depression, anger, and physical illnesses (e.g., obesity, cardiovascular disease; Balestrery, 2016; Elm et al., 2019; Gone & Trimble, 2012).

The third clinically relevant aspect highlighted by scholars of collective trauma is a well-founded mistrust (Guadagnolo et al., 2009; Somasundaram, 2007).

The literature has shown that after human-induced traumatic experiences, social processes, dynamics, and functioning change fundamentally. Communities tend to become more distrustful and silent (Goodkind et al., 2011, Somasundaram, 2007). In Native Americans, the psychological process of mistrust has been associated with health problems, such as diabetes and cancer complications, as well as behavioral problems, including suicide, because individuals do not seek treatment (LaVeist et al., 2000; Guadagnolo et al., 2009).

The fourth clinical aspect of historical trauma identified in the literature reflects attributed damage. The literature shows that Native American populations attribute the high prevalence of mental disorders in their communities to the cumulative and collective trauma they have experienced over generations (Brave Heart & DeBruyn, 1998; Ehlers et al., 2013; Pokhrel & Herzog, 2014; Whitbeck, Chen, et al., 2004). Finally, the fifth clinical aspect that the literature points to reproaches that survivors place on perpetrators. Reproach is expressed in anger toward the perpetrators as well as sadness about the plight of the survivors (Whitbeck, Adams, et al., 2004). In samples of Indigenous Americans, researchers have shown that these symptoms persist due to the ongoing discrimination, marginalization, victimization, and devaluation of suffering this population endures (Jones, 2006; Findling et al., 2019).

Efforts have been made to develop scales for historical trauma and its clinical aspects, especially among Indigenous Americans (Whitbeck, Adams, et al., 2004). However, there is a need to examine historical trauma in other populations that have experienced man-made trauma, such as genocide survivors in Rwanda. An important gap remains in cross-cultural clinical scales because the available scales have been designed exclusively for Indigenous Americans.

The genocide in Rwanda is an example of historical trauma with several features similar to that of Indigenous Americans. The first three features of Hartmann and Gone's (2014) "four Cs" definition (i.e., historical trauma is the *collective* experience of *colonial* injury with *cumulative* effects snowballing to produce *cross-generational* impact) of historical trauma are valid for the present-day trauma sequelae in Rwanda; only the fourth aspect is not yet fully comparable because the traumatic events took place only one generation ago. Similar to Indigenous Americans, widespread trauma sequelae in Rwandan genocide survivors and their descendants include PTSD, depression, and substance abuse (Munyandamutsa et al., 2012; Mutuyimana et al., 2021, Rwanda Biomedical Centre, 2018). Furthermore, much like Indigenous Americans,

many survivors of the Rwanda genocide still live locally close with former perpetrators. Moreover, many important aspects of this historical trauma are still taboo or have not been adequately addressed despite efforts for reconciliation (e.g., apologies from the colonialist countries for their cruelties to Rwanda or descendants of survivors resettled in the United States).

The purpose of this study was to develop and validate the Clinical Aspects of Historical Trauma Questionnaire (CAHTQ), which is intended to capture trauma sequelae in different contexts and countries, and examine the instrument's reliability, validity, and dimensionality in a sample of Rwandan genocide survivors. We also performed a more fine-grained analysis of participants with the highest scores on the CAHTQ (i.e., top 10th percentile) to examine the measure's relevance in PTSD and complex PTSD (CPTSD).

METHOD

Participants and procedure

Study participants were survivors of the Genocide against Tutsi in Rwanda. Data were collected in Rwanda by a team of four local clinical psychologists with clinical backgrounds and experience in data collection. Prior to data collection, these individuals received a 1-day training on ethical considerations in data collection and the use of questionnaires. To reach participants, data collectors were assisted by local authorities who referred them to households with participants who met the study criteria. Participants were approached, and those who agreed to participate completed the questionnaires. The questionnaire was completed in Kinyarwanda, the local language, in a secure room prepared for participants' privacy at home or in a nearby office. The questionnaire took 15–20 min to complete.

The sample size was determined using the rule that a range of 200–300 is appropriate for factor analysis (Boateng et al., 2018). Participants had to be Rwandan citizens and genocide survivors. Because the study questions focused on trauma history memories, participants had to have been at least 5 years old at the time of the genocide. Participants were excluded if they had communication difficulties, were in a mental health crisis at the time of the study, had recently experienced a traumatic event, or refused to participate voluntarily. Ethical approval was obtained from the University of Rwanda College of Medicine and Health Sciences Ethics Committee. Informed consent was obtained from the respondents before the completion of the questionnaire.

CAHTQ development

To identify broad, comprehensive items, deductive and inductive approaches were used (Boateng et al., 2018). We first conducted a content analysis of the global literature on historical trauma and developed an initial pool of items following the theory of historical trauma laid out in the context of Indigenous Americans. Then, we assessed the cultural context and applicability of the items with regard to our study population by collecting qualitative data from 10 individuals in focus groups and five interviews with individuals in the target population. The results were analyzed thematically to clarify which items should be added to or deleted from the initial questionnaire. Schinka et al. (2012) point out that the initial pool of items developed should be at least twice as long as the desired final scale; thus, the initial CAHTQ consisted of 66 items representing theoretically relevant areas of historical trauma dimensions.

To measure content appropriateness (DeVellis, 2012), relevance, and presentation, as well as relevant experiences for the target audience (McPhail, 2007), experts and judges from the target population were interviewed. After determining a list of items to validate, we consulted experts in clinical psychology, cultural psychology, and basic science. A panel of 10 experts then performed a content analysis, conducting two independent reviews to select questions that were reasonable, accurate, and interpretable. Experts analyzed and either accepted, rejected, or modified the item depending on the majority opinion. Following this step, five individuals from the target population who were assumed to have a knowledge of history, psychology, and Rwandan culture were asked to assess the items to determine whether they could be easily understood and were appropriate for the intended construct and assessment objectives (Boateng et al., 2018). Their feedback was adapted to make the items developed clearer and more cognitively understandable.

Pretesting questionnaire

A pretest was conducted before the survey began to ensure that the items were meaningful to the target group and to minimize misunderstandings and subsequent measurement errors. The pretest was conducted after the items were translated into the native language, Kinyarwanda. Draft items were presented to seven participants from the target population in stakeholder interviews. Participants were asked to verbalize the mental process involved in answering the questions. Their responses ensured that respondents understood the questions as the developers

intended and were able to answer in a way that was consistent with their experiences (Beatty & Willis, 2007). The results of the pretest helped to improve poorly worded items and facilitated the revision of wording to make items as well understood as possible.

Measures

Clinical aspects of trauma history

Items on the 20-item CATHQ are scored on a 5-point Likert scale ranging from 0 (*never*) to 4 (*always*). The measure has five subscales, each of which comprises four items. Total scores can range from 0 to 80, and subscale scores range from 0 to 16. Cutoff thresholds have not yet been determined, but a score of 0 indicates no clinical aspects of historical trauma, whereas higher scores indicate more significant clinical aspects of historical trauma. In the present study, the reliability of the questionnaire was excellent, Cronbach's $\alpha = .97$.

Trauma history

The International Trauma Questionnaire (ITQ; Cloitre et al., 2018) is an 18-items measure of PTSD symptoms based on criteria in the *ICD-11* (WHO, 2019). The measure comprises two subscales: The first is used to assess core symptoms of PTSD (nine items), and the second relates to symptoms of CPTSD (nine items). Responses are rated on a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*extremely*). The total score can range from 0 to 72, whereas subscale scores range from 0 to 36. Cutoffs for clinical significance follow the *ICD-11* PTSD criteria, with higher scores reflecting significant symptoms of PTSD and/or CPTSD. In a Rwandan sample, the ITQ demonstrated high internal reliability (Cronbach's $\alpha = .91$; Shrira et al., 2019). In the present sample, Cronbach's alpha for the total score was .93.

Fatalism

The six-item Fatalism Scale (Esparza et al., 2015) is a shortened version of the more comprehensive Multidimensional Fatalism Measure, which was developed simultaneously in Spanish and English for use in cross-cultural and multilingual research and also includes subscales used to assess divine control, helplessness, luck, and internality. Response options range from 1 (not *at all true*) to 5 (*strongly*

agree), with total scores ranging from 0 to 30. Higher scores reflect a higher degree of acceptance of or submission to fate. In the present study, Cronbach's alpha for the Fatalism Scale was .87.

Depressive symptoms

The nine-item Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001) is the depression module of the self-administered version of the PRIME-MD diagnostic instrument for common mental disorders. The measure corresponds with *DSM-IV* depression criteria (APA, 1994), with items rated on a scale of 0 (*not at all*) to 3 (*almost every day*). Score categories are 0–4 for no depression, 5–9 for mild depression, 10–14 for moderate depression, 15–19 for moderately severe depression, and 20–27 for severe depression. In the present study, Cronbach's alpha for the PHQ-9 was .87.

Coping strategies

An adaptation of the Brief Cope Inventory (Brief-COPE; Carver et al., 1989) was developed to assess coping techniques. The measure consists of 12 items rated on a scale of 1 (*not at all*) to 4 (*always*). This version of the Brief-COPE was adapted to the Rwandan context by Munyanziza et al. (2021). This Rwandan version contains seven items that are highly relevant in the Rwandan context and was found to demonstrate adequate psychometric properties. Total scores on the Rwandan adaptation range from 0 to 28, with higher scores reflecting more use of defective coping strategies. In the present sample, Cronbach's alpha was .78.

Forgiveness

An adapted version of a 22-item, self-report questionnaire developed by Mullet & Azar, 2009) was used to assess forgiveness. Responses were rated on a five-Likert scale ranging from 0 (*disagree at* all) to 4 (*agree completely*). For the present study, we used only the first eight items, which are designed to measure the respondent's willingness to forgive. Scores range from 0 to 24, with higher scores reflecting more of a willingness to forgive. The full version of this questionnaire was previously used in a Rwandan sample and demonstrated moderate reliability (Cronbach's α = .77; Mukashema & Mullet, 2012). In the present study, Cronbach's alpha was .92.

Willingness to reconcile

The 12-item, self-report Reconciliation Sentiment Questionnaire (Mukashema & Mullet, 2012) was used to assess respondents' willingness to reconcile. Items are rated on a 5-point Likert scale ranging from 0 (*disagree*) to 4 (*agree completely*), with total scores ranging from 0 to 36. Higher scores reflect more of a willingness to reconcile.

The questionnaire was used in a previous study in a Rwandan sample and demonstrated good reliability (Cronbach's α = .88; Mukashema & Mullet, 2012). In the present sample, Cronbach's alpha was .77.

Data analysis

Data were analyzed using IBM SPSS Statistics (Version 27) and IBM Amos (Version 27). Prior to analysis, the relevant assumptions of the statistical analysis were checked. An examination of the data revealed no missing data or outliers, and analysis of scatter plots of the residuals showed that the normality assumption was met. A descriptive statistical analysis was conducted to determine participant sociodemographic characteristics.

To reduce the number of items, item distribution and item-total correlation were performed.

At this stage, items with a corrected overall correlation below .30 or above .70 were excluded from the pool of items. To further reduce the number of items in the questionnaire and obtain factor groupings, principal axis factoring with direct Oblimin rotation was performed. Items were excluded due to low loadings (i.e., less than .40), insufficient communalities (i.e., less than .30), and low content and meaning agreement with other items. To determine the number of factors, a parallel analysis was performed and a scree plot was constructed. Factors were confirmed using confirmatory factor analysis (CFA) with maximum likelihood estimation. The internal consistency of the questionnaire was calculated using Cronbach's alpha (Cronbach, 1951). To test the construct validity of the questionnaire and discriminant validity of its subscales, the average variance extraction (Fornell & Larcker, 1981) and heterotrait–monotrait (HTMT) procedures (Henseler et al., 2015) were used. The convergent and discriminant validity of the questionnaire was tested using Pearson correlations.

All instruments were back- and forward-translated to create equivalent Kinyarwanda versions of the original English version. The first author, whose native language is Kinyarwanda, translated the instruments from English into Kinyarwanda, emphasizing conceptual rather than

literal translations. A bilingual Kinyarwanda–English panel expert identified and resolved the inappropriate expressions and concepts in the translation. The full Kinyarwanda version of the questionnaires was then translated back into English by an independent translator whose first language is English and who had no knowledge of the questionnaires. Discrepancies were discussed by the bilingual expert panel to obtain the final Kinyarwanda version.

RESULTS

Participant demographic characteristics

The sample consisted of 261 participants, 52.9% ($n = 138$) of whom were female. The mean participant age was 46.30 years ($SD = 11.95$), and 41.3% ($n = 108$) of participants reported being between 5 and 12 years old during the genocide (current age: 32–39 years), 31.4% ($n = 82$) were 13–25 years old during the genocide (current age: 40–52 years), 23.7% ($n = 62$) were 26–44 years old during the genocide (current age: 53–71 years), and 3.4% ($n = 9$) were 45–60 years old during the genocide (current age: 72–87 years). Age classifications of participants at the time of the genocide were made according to WHO age standards (Dyussenbayev, 2017). Most participants (59.8%) were married at the time of the interview, 18.0% were widowed, 17.2% were single, and 5.0% were separated. Of the 261 participants, 41.0% ($n = 107$) were employed by an outside employer, 22.2% ($n = 58$) were self-employed, and 36.8% ($n = 96$) were unemployed. A total of 23.4% of the sample ($n = 61$) had no formal education, 22.6% ($n = 59$) reported having completed primary school, 19.5% ($n = 51$) had attended secondary school, and 34.5% ($n = 90$) had completed university. Most participants identified as Christian 93.5% ($n = 244$), whereas 3.8% ($n = 10$) were Muslim and 2.7% ($n = 7$) had no religious affiliation. Approximately half of the sample ($n = 132$, 50.6%) resided in urban areas; 49.4% ($n = 129$) lived in rural areas.

Exploratory factor analysis of item pool

An exploratory factor analysis (EFA) of the CAHTQ revealed nine factors with the following eigenvalues: 17.72, 5.56, 3.30, 2.30, 1.85, 1.18, 0.97, 0.82, 0.64. A parallel analysis of nine factors indicated the following eigenvalues: 2.04, 1.93, 1.82, 1.76, 1.54, 1.76, 1.69, 1.64, 1.59. The results of the parallel analysis and scree plot confirmed five factor loadings. In this step, nine items that had low loadings in the EFA (i.e., less than .40) and low communalities (i.e., less than .30) were eliminated from the item pool. To further reduce the number of items in the questionnaire and obtain a clear factor structure, principal axis factoring was performed, and 20 additional items were excluded from the item pool. Items were excluded due to low loadings in the EFA, insufficient communalities, and low congruence regarding content and meaning with other items. The final latent factor model showed no cross-loading items (i.e., higher than .40) and explained 60.5% of the cumulative variance in the model. Only 20 items remained, which were regrouped into five factors (see Table 1). Factor 1 accounted for 36.1% of the total variance, Factor 2 for 13.2, Factor 3 for 4.1%, Factor 4 for 3.7%, and Factor 5 for 3.2%.

Factor 1 represented feelings of disapproval or disappointment expressed by survivors toward the actions of perpetrators and was labeled "Reproaches." Factor 2 included items that represented the survivors' state or quality of mistrust toward their perpetrators and was labeled "Distrustfulness." Factor 3 was composed of the items that represented a state of extreme physical or mental fatigue due to long-term effects of trauma and was labeled "Exhaustion." Factor 4 reflected items regarding perceptions of loss related to culture and was labeled "Cultural Loss." Finally, Factor 5 comprised items indicating that the psychological problems of survivors were primarily caused by exposure to the genocide and, thus, was labeled "Attributed Damage."

CFA

Table 2 shows the CAHTQ model fit indices. We considered the model fit to be adequate if all the formulated criteria were met: a X^2/df value of 3.0 or below, root mean standard error of approximation (RMSEA) value of .08 or below, standardized root mean square residual (SRMR) value of .10 or below, comparative fit index (CFI) value of .95 or above, and a Tucker–Lewis Index (TLI) value of .95 or above (Hu & Bentler, 1999; Kline, 2011; Rasmussen et al., 2019; Schermelleh-Engel et al., 2003). According to these criteria, the model was found to fit the data very well for each factor as well as for the overall model with combined factors. However, as expected, the single-factor model fit the data poorly, with all indices below standard cutoff values.

Tests of reliability

The internal consistency of the final CAHTQ items, including the five factors, was calculated. The results demonstrated very good reliability for the total CAHTQ scale,

TABLE 1 Factor loadings of Clinical Aspects of Historical Trauma Questionnaire items

Number	Item	Factor 1: Reproaches	Factor 2: Distrust	Factor 3: Exhaust	Factor 4: Cultural loss	Factor 5: Attributed damage
1	I have bad thoughts about people who deny or belittle the genocide	.84				
2	I feel distressed by people who do not show me where the bodies of my family members are buried	.83				
3	I feel angry towards people who try to hide that they killed our people	.81				
4	I feel annoyed by people who belittle what the survivors have suffered	.74				
5	I still feel resentment/ mistrust towards perpetrators, even after all these years		.51			
6	I am still wound up because of living besides former perpetrators		.55			
7	I feel that my children should limit any contact with the children of former perpetrators		.64			
8	I still feel fearful when I am with former perpetrators		.51			
9	I still feel that my dignity has been degraded			.76		
10	I still feel that I have no control over the things that happen to me			.76		
11	I feel left out without people's help			.79		
12	Since the genocide, I still feel powerless when dealing with problems			.78		
13	I am still upset by not living in the same area with my relatives and former neighbors				.64	
14	I am saddened that our families are not helping each other as they did before				.75	
15	I miss the cultural time we had together with my family members				.84	
16	I still miss the local traditional social events that we had together before the genocide				.75	
17	For me, there is a connection with the genocide that has led me to feel that everything is worthless					.43
18	For me, there is a connection with the genocide, so that I now am not motivated to work					.41
19	For me, there is a connection with the genocide that has led me to smoke and/or use other drugs to cope					.8
20	For me, there is a connection with the genocide that has led me to feel the need to self-harm					.55

Note: N = 261. Only factor loadings of .40 or greater are listed.

TABLE 2 Fit indices for confirmatory factor analysis of the Clinical Aspects of Historical Trauma Questionnaire

Model	Number of items	χ^2	df	p	χ^2/df	RMSEA	p	SRMR	CFI	TLI
Overall model (Factors 1–5)	20	271	160	< .001	1.693	.052	.375	.05	.96	.96
Overall single-factor model	20	1,474.9	170	< .001	8.675	0.17	< .001	.14	.57	.52

Note: df = degree of freedom; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; CFI = comparative fit index; TLI = Tucker–Lewis index.

TABLE 3 Construct validity of the Clinical Aspects of Historical Trauma Questionnaire

Subscale	Reproaches	Distrustfulness	Exhaustion	Attributed Damage	Cultural Loss	AVE
Reproaches	_	.6	.31	.27	.74	.73
Distrustfulness	.54***	–	.62	.59	.59	.54
Exhaustion	.27***	.52***	–	.83	.38	.61
Attributed Damage	.23***	.47***	.68***	–	.32	.50
Cultural Loss	.65***	.50***	.34***	.27***	–	.65

Note: Italic values below the diagonal represent intercorrelations; values above the diagonal represent heterotrait–monotrait values and average variance extracted (AVE).

***p < .001.

Cronbach's α = .91. Four subscales showed high internal consistency, including Reproaches, Cronbach's α = .91; Distrust, Cronbach's α = .82; Exhaustion, Cronbach's α = .86; and Cultural Loss, Cronbach's α = .88. The Attributed Damage subscale demonstrated adequate internal consistency, Cronbach's α = .76.

Tests of validity

CAHTQ construct validity

Table 3 shows the results of the construct validity of the questionnaire. Each subscale demonstrated convergent validity, with the average variance extracted (AVE) for all subscales greater than .50 (Fornell & Larcker, 1981). The HTMT ratio of the correlation test confirmed the discriminant validity of each subscale, as all HTMT values were less than .85 (Henseler et al., 2015; Kline, 2011).

CAHTQ convergent and discriminant validity

Table 4 shows the correlations between the CAHTQ and its subscales. The results demonstrated a positive correlation between the CAHTQ and its subscales. As expected, CAHTQ subscales were positively correlated with measures of PTSD, disturbances in self-organization (DSO; i.e., a criterion of CPTSD), depression, and fatalism, indicating convergent validity. The CAHTQ was negatively cor-

related with measures of coping strategies, reconciliation sentiment, and willingness to forgive, demonstrating its discriminant validity.

PTSD and CPTSD relevance among the top 10th percentile of CATHQ scores

A total of 63 participants constituted the top 10th percentile of CAHTQ scores in the sample. Just under half (*n* = 31, 49.2%) of these individuals were assigned a probable CPTSD diagnosis, and an additional 18 (28.5%) were assigned a probable PTSD diagnosis. The overall rate of 77.7% of this subgroup of participants with a probable diagnosis of PTSD or CPTSD suggests severe impairment among these individuals and indicates a degree of convergent validation of the CAHTQ.

DISCUSSION

The aim of the present study was to develop and validate a new measure, the CAHTQ, in a sample of Rwandan genocide survivors; a further aim was to more closely analyze individuals who scored in the top 10th percentile to assess the relevance of the CATHQ with regard to PTSD and CPTSD. Deductive and inductive methods were used in the development of the questionnaire to identify context-appropriate, comprehensive, and valid items (Hinkin, 1995). The development of the CAHTQ was

TABLE 4 Descriptive statistics and associations (Pearson correlations) between Clinical Aspects of Historical Trauma Questionnaire (CAHTQ) scores and other constructs

Total score	CAHTQ Reproaches	Distrust	Cultural Loss	Exhaustion	Attributed Damage	
CAHTQ total score	–	.743[**]	.820[**]	.764[**]	.735[**]	.674[**]
Reproaches		–	.540[**]	.651[**]	.276[**]	.237[**]
Distrust			–	.503[**]	.527[**]	.475[**]
Cultural Loss				–	.340[**]	.270[**]
Exhaustion					–	.684[**]
Attributed Damage						–
M	34.58	11.41	6.86	9.6	4.04	2.66
SD	16.36	4.48	4.61	4.85	4.29	3.52
Range	0–80	0–16	0–16	0–16	0–16	0–16

guided by a review of the literature on historical trauma, primarily among Indigenous Americans (e.g., Brave Heart, 1999, 2003; Hartmann & Gone, 2014). The initial pool of developed items consisted of 66 items, but after all development steps were completed, the item pool remained at 49 items. The number of items in the initial pool was considered sufficient, as it was more than twice as large as the desired final scale (Schinka et al., 2012).

The CATHQ validation process began with the reduction of items through EFA and the investigation of other psychometric properties. The final results of the EFA indicated a 20-item measure grouped into five factors. The results of a CFA demonstrated good model fit, as all appropriate fit indices were close to the specified limits (Hu & Bentler, 1999; Kline, 2011; Rasmussen et al., 2019). The construct validity of the CATHQ subscales was demonstrated by the results of the AVE for convergent validity (Fornell & Larcker, 1981) and the HTMT analysis for discriminant validity (Henseler et al., 2015). The reliability of the CAHTQ was tested to assess the consistency and degree of measurement error of the questionnaire (McMillan & Schumacher, 2006), with the results demonstrating high internal consistency (Cornbach, 1951). The CAHTQ was found to be a valid measure of the latent dimensions and constructs it was designed to assess (Raykov & Marcoulides, 2011), as it was positively and significantly correlated with other scales measuring similar constructs, including PTSD, depression, DSO, and fatalism. It was also negatively correlated with other measures that presumably do not measure the same variable or concept, including measures of coping strategies, forgiveness, and the willingness to reconcile. In addition, the results indicated that most participants (77.7%) with scores in the top 10th percentile for the CATHQ in the present sample met the criteria for a probable PTSD or CPTSD diagnosis; these results add another important contribution to the findings on the convergent validity of the CATHQ. Previ-

ous theoretical literature has elaborated that there should be a strong association between PTSD, including its complex forms, and historical trauma due to sequelae related to the prolonged and repeated trauma that survivors have (Brave Heart, 2003; Herman, 1992). Taken together, the psychometric properties of the CAHTQ suggest that the questionnaire is a valid and reliable instrument for measuring the clinical aspects of historical trauma. This gives rise to a number of implications that should be considered.

First, the CAHTQ is a new psychological instrument developed to assess historical trauma. The measure was validated in a different sample population than previous assessments (i.e., Indigenous Americans). It allows the clinical assessment of the long-term consequences of historical trauma at the individual level but has a specific focus on community-level perceptions (e.g., cultural loss). The use of the CAHTQ by researchers and clinicians could help determine the extent of the lingering effects of trauma in different generations and, more broadly, provide a multilevel psychosocial intervention. This questionnaire was developed with the intention of being used in different contexts and countries. However, to date, the CATHQ has only been validated in the Rwandan population. Further validation studies in other populations are the aim of future projects.

There are several limitations of the present study to consider. First, the CAHTQ was developed for use in a variety of settings and contexts, including research and clinical settings. However, the use of this questionnaire in clinical settings requires a test of sensitivity and specificity to distinguish clinical case status. A standardization process should be considered in future studies, with large samples and diverse populations. Although this instrument refers to historical trauma, no previous measurement instruments for this construct were used in parallel to investigate convergent validity. We chose not to include other instruments because we focused on the

clinical aspects of historical trauma, including PTSD and other psychopathologies. This has not been done in this detailed way in any of the studies on previous instruments. However, in the future, the CAHTQ and other historical trauma–related instruments should be used in conjunction. In addition, there are other measures of inter- or transgenerational transmission of trauma we did not examine; again, this was because the focus of the present study was investigating current psychopathology, but these measures should be included in future studies. Finally, when larger data sets are available, the interrelations between the CAHTQ subscales and sociodemographic factors should be examined. The intersectionality theory points out that in addition to political causes of individual problems, other structural factors, such as gender, ethnicity, and social class can contribute to mental health (Seng et al., 2012).

Various researchers have conducted extensive work in different populations and demonstrated the presence of PTSD following traumatic experiences. On the other hand, clinicians and anthropologists have shown that the standard criteria for PTSD are insufficient to capture the full picture of suffering in survivor groups of massive and genocidal trauma and their offspring (Brave Heart, 2003; Gone, 2013; Gone et al., 2019). The theory of historical trauma in Indigenous American Peoples (Brave Heart, 2003; Evans-Campbell, 2008) and the social–interpersonal model of PTSD (Maercker & Horn, 2013) have indicated that posttraumatic sequelae go beyond the individual level covered by the well-established PTSD criteria. Previous researchers have mentioned that family, community, cultural perspectives, and the legacy of trauma in different generations are the aspects not covered by the current PTSD criteria (e.g., Evans-Campbell, 2008; Maercker & Hecker, 2016). For this reason, the possibility of inadequate diagnosis, treatment, and prevention of trauma transmission exists. Subsequently, researchers have begun to search for another nosological concept that can cover all levels of historical trauma. The available measures of historical trauma have been developed only within the context of Indigenous Americans in the United States and Canada and are related to the assessment of psychological symptoms of loss. In developing this new instrument, the available theories on the clinical aspects of historical trauma in different contexts (Brave Heart, 2003; Somasundaram, 2007), and experiences with the clinical aspects of historical trauma in Rwanda were considered so that the measure can be used in different contexts and countries. However, this will be achieved only after validation in a different cultural context. Furthermore, postgenocide research has primarily concentrated on PTSD among survivors. The present study also provides a link to the new diagnosis of CPTSD according to *ICD-11* (Maercker et al., 2013; WHO, 2019).

Therefore, clinicians, researchers, and policymakers may now find a reason to go beyond the traditional concept of PTSD based on these developments. Given the high prevalence of PTSD and CPTSD in the general population of survivors in Rwanda, clinicians and policymakers need to consider the treatment and prevention of mental disorders through a community-based approach.

OPEN PRACTICES STATEMENT
The study was not formally preregistered. Neither the data nor the materials have been made available in a permanent third-party archive; requests for the data or materials should be sent via email to the first author at [celestin.mutuyimana@uzh.ch].

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