



Intergenerational impacts of trauma and hardship through parenting

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Effects of parental PTSD on parenting are less widely investigated, but studies of previously deployed military parents have found that parental PTSD is associated with poor child outcomes including increased internalising problems such as depression (Herzog, Everson, & Whitworth, 2011) and poor socioemotional adjustment (Lester et al., 2016). A recent review highlighted three categories of PTSD symptoms that may interfere with responsive parenting: caregiver avoidance symptoms that interfere with participation in parent-child activities, emotional disturbances such as blunted positive emotions and increased anger, conflict, and distress that interferes with affective engagement and expression of warmth (Creech & Misca, 2017).

In this paper, we use a unique sample of caregivers

Checklist-Civilian Version (PCL-C) (Conybeare, Behar, Solomon, Newman, & Borkovec, 2012), which has been validated in Rwanda (Fodor, Pozen, Ntaganira, Sezibera, & Neugebauer, 2015). The PCL-C is a 17-item measure that assesses DSM-IV defined PTSD symptoms. It uses a 5-point scale ranging from 'not at all' to 'extremely'. The scale showed good internal reliability ($\alpha = .919$). Severity of PTSD symptoms was modelled as a latent variable.

Emotion dysregulation. Emotion dysregulation was assessed at T1 using an abbreviated version of the Difficulties in Emotion Regulation Scale (DERS) (Gratz & Roemer, 2004), which assesses difficulties in emotion regulation related to poor awareness and understanding of emotions, poor acceptance of emotions, difficulties engaging in goal-directed behaviour, difficulties refraining from impulsive behaviour when experiencing negative emotions, and poor access to effective emotion regulation strategies. We used a 24-item version that excluded items that had been found to show low item-total correlations in our pilot study in Rwanda. This version excluded all positively worded items and represents all subscales except for the 'awareness' subscale, which is in line with several other studies that have found the awareness subscale to be least associated with the overall DERS score (Bjureberg et al. 2017; Neumann, van Lier, Gratz, & Koot, 2010). The response scale indicates how frequently an item applies to the respondent using a 5-point scale ranging from 'almost never' to 'almost always'. The abbreviated DERS showed good internal reliability ($\alpha = .955$). We created a latent variable for emotion dysregulation.

Parenting—acceptance and rejection. Parenting behaviours were assessed using the short (24-item) parent-report version of the Parental Acceptance-Rejection Questionnaire (PARQ) (Rohner & Khaleque, 2005). The PARQ measures expressions of acceptance and rejection in parents' behaviours towards their offspring. The PARQ was selected because of good alignment with parenting constructs assessed qualitatively in Rwanda. The core dimensions of the PARQ have been found to represent a parenting style that consistently predicts adverse child outcomes, including socioemotional maladjustment, internalising and externalising problems, and poor school performance (Ali, Khaleque, & Rohner, 2015; Khaleque & Rohner, 2012; Putnick et al., 2015). For each item, parents report on their behaviour towards the child using a four-point

Table 1 Descriptive statistics for study population

	Descriptive statistic
Caregiver characteristics	
Age: [mean (SD)]	36.13 (10.95)
Female: [count (%)]	506 (69.1%)
Relationship to child: [count (%)]	
Mothers	457 (62.4%)
Father	217 (29.6%)
Aunts/Uncles/step parents/adoptive parent	5 (0.6%)
Grandparent	53 (7.2%)
Less than primary education [count (%)]	510 (69.6%)
Married/cohabitating [count (%)]	475 (64.9%)
Child characteristics	
Age [Mean (SD)]	21.0 (8.2)
6–12 [count (%)]	90 (16.1%)
12–18 [count (%)]	128 (22.9%)
18–24 [count (%)]	106 (19.0%)
24–30 [count (%)]	136 (24.3%)
30–36 [count (%)]	99 (17.7%)
Female: [count (%)]	262 (46.9%)
Lifetime trauma events reported at T1 [count (%)]	
Trauma 1: House destroyed?	193 (26.4%)
Trauma 2: Forced to flee?	101 (13.8%)
Trauma 3: Self or close family member experienced sexual violence?	51 (7.0%)
Trauma 4: Experienced lack of security?	212 (29.0%)
Trauma 5: Been wounded?	69 (9.4%)
Lifetime trauma events (cumulative trauma score) [Mean (SD)]	0.856 (1.06)
0 trauma exposures [count (%)]	355 (48.5%)
1 trauma exposures [count (%)]	212 (29.0%)
2 trauma exposures [count (%)]	99 (13.5%)
3 trauma exposures [count (%)]	42 (5.7%)
4 trauma exposures [count (%)]	17 (2.3%)
5 trauma exposures [count (%)]	4 (0.5%)
Daily hardships reported at T1 [count (%)]	
Daily hardship 1: Was very ill	258 (35.2%)
Daily hardship 2: Death of someone close	322 (44.0%)
Daily hardship 3: Separation from spouse/partner	85 (11.6%)
Daily hardship 4: Lost job or source of income	256 (35.0%)
Daily hardship 5: Major financial crisis	670 (91.5%)
Daily hardship 6: Someone close had a serious illness or injury	241 (32.9%)
Daily hardship 7: Someone close was physically attacked or assaulted	96 (13.1%)
Daily hardships (cumulative daily hardship score): Mean (SD)	2.63 (1.46)
0 daily hardships [count (%)]	18 (2.5%)
1 daily hardships [count (%)]	140 (19.1%)
2 daily hardships [count (%)]	195 (26.6%)
3 daily hardships [count (%)]	134 (18.3%)
4 daily hardships [count (%)]	91 (12.4%)
5 daily hardships [count (%)]	51 (7.0%)
6 daily hardships [count (%)]	26 (3.6%)
7 daily hardships [count (%)]	3 (0.4%)
Prevalence mental health problems at T1 [count (%)]	
Screen positive for internalising problems	331 (45.2%)
Screen positive for PTSD	136 (18.6%)

Results

Descriptive statistics

Descriptive sample information and correlations among study variables are shown in Tables 1 and 2. The majority of caregivers were biological mothers (62%) and fathers (30%). A small fraction were grandparents (7%) or aunts/uncles/step parents (<1%). The most common lifetime trauma event

was "experienced lack of security", reported by almost 30% of the caregivers. The most common recent daily hardships were experiencing a major financial crisis (92%), experiencing death of someone close (44%), and losing a job or source of income (35%). Using standard cut-offs, 45% of the caregivers screened positive for possible internalising problems and 19% screened positive for possible PTSD.

Correlations

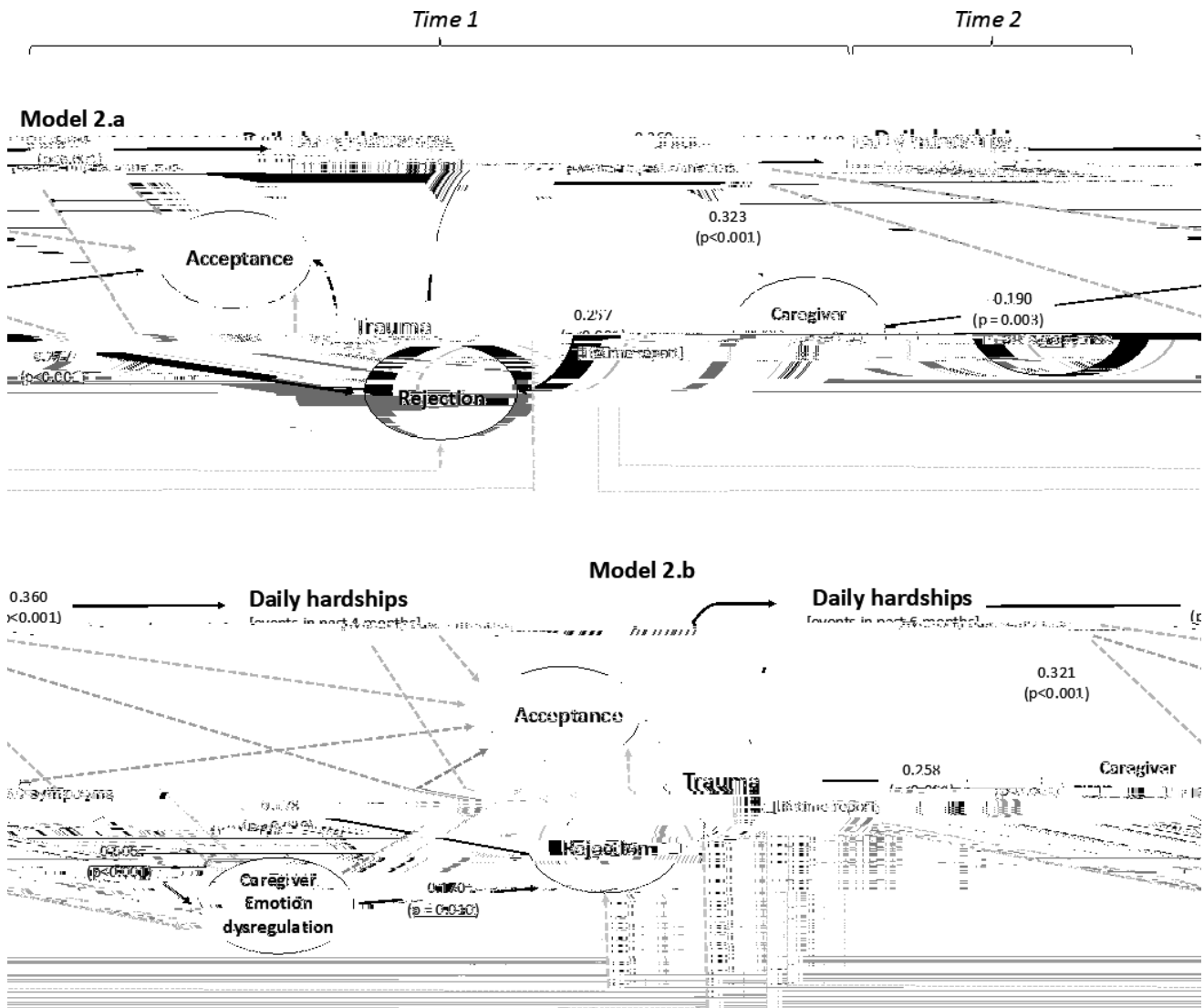


Figure 3 Structural equation models with caregiver PTSD. Models show only the estimates and *p*-values (in parentheses) for significant effect. Dashed grey lines indicate that the path was estimated but not significant (*p* < .05). All estimates can be found in Appendix S2

Table 2 Estimated correlations among study variables

	Trauma	Daily hardship T1	Daily hardship T2	Internalising/ PTSD	Emotion dysregulation	Rejection
Model 1						
Daily hardship T1	0.174					
Daily hardship T2	0.063	0.363				
Internalising symptoms	0.290	0.363	0.132			
Emotion dysregulation	0.167	0.250	0.091	0.574		
Rejection	0.072	0.210	0.155	0.232	0.298	
Acceptance	0.061	0.094	0.036	0.140	0.218	0.605
Model 2						
Daily hardship T1	0.173					
Daily hardship T2	0.062	0.360				
PTSD symptoms	0.314	0.366	0.132			
Emotion dysregulation	0.167	0.252	0.091	0.610		
Rejection	0.074	0.207	0.137	0.311	0.300	
Acceptance	0.062	0.091	0.023	0.202	0.220	0.605

Table 3 Estimated indirect effects of trauma and hardship on parenting

Indirect effects via caregiver mental health	Estimate	SE	p-Value	95% CI (Bootstrapped)	
				LL	UL
Via internalising					
Trauma → Internalising → Rejection	0.011	0.013	.395	0.013	0.040
Trauma → Internalising → Acceptance	0.001	0.016	.957	0.034	0.028
Daily hardship → Internalising → Rejection	0.016	0.018	.385	0.019	0.054
Daily hardship → Internalising → Acceptance	0.001	0.022	.957	0.044	0.041
Via internalising and emotion regulation					
Trauma → Internalising → Emotion dysregulation → Rejection	0.031	0.009	.001	0.016	0.054
Trauma → Internalising → Emotion dysregulation → Acceptance	0.027	0.010	.007	0.052	0.010
Daily hardship → Internalising → Emotion dysregulation → Rejection	0.043	0.012	<.001	0.022	0.071
Daily hardship → Internalising → Emotion dysregulation → Acceptance	0.037	0.013	.005	0.049	0.014
Via PTSD					
Trauma → PTSD → Rejection	0.046	0.022	.036	0.005	0.092
Trauma → PTSD → Acceptance	0.026	0.024	.269	0.071	0.021
Daily hardship → PTSD → Rejection	0.057	0.027	.038	0.006	0.116
Daily hardship → PTSD → Acceptance	0.033	0.030	.276	0.096	0.024
Via PTSD and emotion regulation					
Trauma → PTSD → Emotion dysregulation → Rejection	0.027	0.011	.018	0.008	0.056
Trauma → PTSD → Emotion dysregulation → Acceptance	0.024	0.014	.087	0.074	0.000
Daily hardship → PTSD → Emotion dysregulation → Rejection	0.033	0.014	.015	0.010	0.066
Daily hardship → PTSD → Emotion dysregulation → Acceptance	0.030	0.017	.082	0.070	0.000

in the model, we found that the association between caregiver internalising and rejecting parenting behaviours disappeared. Instead, we now observed a significant negative prospective association between emotion dysregulation and acceptance, and a positive prospective association between emotion dysregulation and rejection. This seems to suggest that the effect of caregiver internalising on rejecting parenting behaviours was largely accounted for by emotion dysregulation (Model 2.b). The model explained 18.5% of the variance of internalising symptoms, 33.1% of the variance of emotion regulation, 5.0% of the variance of acceptance, and 11.7% of the variance of rejection. Examination of the indirect effect estimates confirmed the presence of indirect pathways by which more lifetime trauma and more recent daily hardships predicted lower acceptance and higher rejection via internalising symptoms and emotion dysregulation (Table 3).

Model 2.a: Caregiver PTSD (not accounting for emotional dysregulation)

Model 2.a (Figure 3A) met the criteria for acceptable model fit: RMSEA = 0.024, SRMR = 0.045, CFI = 0.946. The chi-square ($\chi^2 = 1211.041$, $df = 861$) had a p -value < .05. Lifetime trauma and recent daily hardships were positively associated with PTSD symptoms, which in turn were prospectively associated with more rejection and lower acceptance. There were no effects of lifetime trauma or recent daily hardships on either rejection or acceptance. The model explained 20.0% of the variance of PTSD symptoms, 3.9% of the variance of acceptance, and 10.9% of the variance of rejection.

Model 2.b: Caregiver PTSD accounting for emotional dysregulation

Model 2.b also showed acceptable model fit: RMSEA = 0.022, SRMR = 0.045, CFI = 0.950. The chi-square ($\chi^2 = 2901.473$, $df = 2,131$) had a p -value < .05. As expected, we found that lifetime trauma and daily hardships were positively associated with PTSD symptoms, yet neither showed association with emotion dysregulation. Caregiver PTSD symptoms, however, were strongly associated with emotion dysregulation. With regard to parenting behaviours, we found that the association between PTSD symptoms and acceptance was attenuated, whereas the association between PTSD symptoms and rejection remained significant when emotion dysregulation was added to the model. Emotion dysregulation was associated with more rejection, but showed no association with acceptance. These results suggest that the effect of PTSD symptoms on parental rejection is partially independent of emotion dysregulation. The model explained 19.8% of the variance of PTSD symptoms, 37.4% of the variance of emotion regulation, 5.6% of the variance of acceptance, and 13.0% of the variance of rejection. We found that both lifetime trauma and daily hardships were indirectly associated with more rejection via PTSD symptoms and emotional dysregulation (see Table 3).

Sensitivity analyses

Models that excluded grandparents did not yield different results from those that included all caregivers (see Supplemental information).

Discussion

trauma and ongoing hardship. The identification of emotion dysregulation as a shared underlying mechanism accounting for large portions of the effects of poor caregiver mental health on parenting behaviours is important because it identifies a key target for intervention that may benefit a wide range of caregivers experiencing mental health problems. While interventions exist to address specific mental health disorders, such as depression, in low-resource settings, disease-specific approaches create the need for availability of a broad selection of interventions, many of which require specialised training. This challenge has led to the rise of stabilisation-focused common-elements approaches whereby one intervention can be used to treat an array of mental health problems (Murray & Jordans, 2016). The findings of emotion dysregulation as an important cross-cutting mechanism linking caregiver internalising and PTSD with adverse parenting behaviours support the utility of common-elements-

COLLEGE_2017), and ELMA Philanthropies (Grant number 16-F0018-BC). Findings, interpretations and conclusions expressed in this paper are entirely those of the authors. The authors have declared that they have no competing or potential conflicts of interest.

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Key points

Parental expressions of rejection and acceptance are known to predict long-term emotional outcomes in children.

Among economically vulnerable caregivers in Rwanda, caregivers' mental health is associated with parenting practises related to the expression of acceptance and rejection. Moreover, these associations are partially accounted for by caregiver emotion dysregulation.

Parenting-focused intervention services delivered to vulnerable caregivers who have experienced trauma and/or financial hardship should incorporate active elements to reduce mental health problems and emotion dysregulation in order to achieve more positive parenting practises and break intergenerational transmission of emotional problems.

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Accepted for publication: 6 November 2020