Trauma, complex PTSD, and somatoform dissociation among disadvantaged parents in a community center: Prevalence and relationships with parenting and children's behavioral problems

Abstract

Background: Although the health effects of trauma have been increasingly recognized, much less is known about the intergenerational effects of trauma and its outcomes.

Aims: This study examined trauma and trauma-related mental health problems among socio-economically disadvantaged parents.

Methods: We recruited parents in disadvantaged housing and living conditions from a community development center in Hong Kong (response rate = 74.09%). Participants completed standardized self-report measures.

Results: In this sample of 203 parents, 40.39% and 43.84%, respectively, reported at least one childhood and adulthood traumatic event; 6.90% suffered from probable ICD-11 PTSD/Complex PTSD and/or somatoform dissociation. Parents' disturbances in self-organization (DSO) symptoms were associated with problematic parenting styles. Parents' childhood trauma and DSO symptoms were also associated with children's behavioral problems.

Conclusions: Although trauma is not particularly prevalent in this sample, trauma and trauma-related symptoms are strongly linked to problematic parenting styles (such as over-reacting) and children's behavioral issues. More attention to the intergenerational effects of trauma is necessary from a public mental health perspective.

Keywords: Trauma; Complex PTSD; Dissociation; Parenting; Intergenerational trauma

Trauma, complex PTSD, and somatoform dissociation among disadvantaged parents in a community center: Prevalence and relationships with parenting and children's

Potentially traumatic events, such as major incidents, maltreatment, and assaults, as operationalized using validated measures, such as the Childhood Trauma Questionnaire (CTQ), the Brief Betrayal Trauma Survey (BBTS), and the Life Events Checklist for DSM-5 (LEC-5), are significant etiological risk factors for many physical and mental health problems (Cross et al., 2015; Fung, Ling, et al., 2024; Le Carolyn et al., 2013; Magruder et al., 2017). Trauma, especially when experienced during childhood, can affect an individual in multifaceted ways, such as emotional regulation (Perez et al., 2020), attachment (Choi & Kangas, 2020), interpersonal communication and leadership (Lam et al., 2024), and disturbances in self-organization (DSO) (Jowett et al., 2022).

Although the physical and psychological effects of trauma have been increasingly recognized, much less is known about the intergenerational effects of trauma and its outcomes. In fact, the trauma and trauma-related symptoms experienced by a parent or caregiver can become the adversities for the subsequent generation (e.g., a mother who has experienced violence becomes emotionally unstable when taking care of her children) (Hughes et al., 2017). It should be noted that parents' behaviors are an important social factor that could affect the mental health outcomes of the children (Walker, 2021). It is possible that the effects of trauma of the parents could transmit to their children through maladaptive

behaviors and parenting styles, and this process is known as *intergenerational trauma* (Isobel et al., 2019).

Therefore, it is important to advance our understanding of the prevalence and potential effects of trauma and trauma-related mental health problems among parents in the community. As revealed in a recent systematic review, a few studies found that parental post-traumatic stress disorder (PTSD) is associated with parent-child relationship issues and negative parenting practices (Christie et al., 2019). Given the lack of studies in this regard, more studies are required to understand intergenerational trauma. In particular, since the launch of the ICD-11, to our knowledge, only one study has investigated the prevalence of ICD-11 PTSD and complex PTSD among parents in the community (Fung, Lee, et al., 2024). In fact, after years of research and advocacy (e.g., Cloitre et al., 2012; Herman, 1992a, 1992b; Van der Kolk et al., 2005), complex PTSD has been recognized in ICD-11 as a distinct disorder, which is specifically associated with prolonged or complex trauma. In addition to 'classical PTSD' symptoms, complex PTSD also includes DSO symptoms (i.e., affective dysregulation, negative self-concept, and disturbances in relationships). The validity of complex PTSD has been confirmed across cultures (Cloitre et al., 2021; Cloitre et al., 2018; Folke et al., 2021; Nielsen et al., 2023). Since complex PTSD is particularly related to interpersonal trauma, it might be especially relevant for understanding the effects of intergenerational trauma, such as the mental health consequences stemming from parental

problems or family violence (Bachem et al., 2024; Redican et al., 2022). Meanwhile, it is also important to take dissociation into consideration. Dissociation refers to failures in the process of integrating one's biopsychosocial experiences (e.g., memories, behaviors, identities) (McHugh & Egan, 2023; Nijenhuis & Van der Hart, 2011). It has been conceptualized as a response to trauma, and research also supports this theory, i.e., the trauma model of dissociation (Dalenberg et al., 2012; Loewenstein, 2018). Parents with somatoform dissociation may struggle to interact healthily and mindfully with their children, potentially resulting in inconsistent caregiving and emotional unavailability. It might contribute to behavioral issues in children. However, somatoform dissociation (i.e., pathological dissociation with somatic manifestations), as a common response to trauma and stress, is rarely researched among parents in the community, let alone their potential relationship with parenting styles and children's outcomes.

Against these important knowledge gaps, the present study examined trauma, PTSD and complex PTSD, and somatoform dissociation in a sample of parents in disadvantaged housing and living conditions. Given their socio-economic disadvantage, we hypothesized that trauma and trauma-related symptoms would be particularly common in this sample. We first provided descriptive statistics regarding these experiences, and then examined their associations with parenting styles and children's outcomes. Informed by the above-mentioned literature on intergenerational trauma, we hypothesized that, after controlling for possible confounding

variables (e.g., age, gender, use of psychiatric service, child's disability status), trauma and trauma-related mental health problems would be positively associated with problematic parenting styles (e.g., over-reacting) and children's behavioral problems.

Methods

Participants

This study was approved by the management committee of the nonprofit organization, XXX (blind for review), which is a registered charitable institution recognized by the Hong Kong Government. From June 2024 to January 2025, we recruited potential participants in a community development center. Participants should be members of the center who were currently living in a subdivided flat, a partitioned flat, or a social house in Sham Shui Po with children aged below 16. In addition to this membership requirement, in this survey study, participants should provide informed consent and agree to participate. Participants with an officially diagnosed reading disability, intellectual disabilities, or dementia were excluded. Potential participants were recruited by the social workers or social work students of the center, and they were invited to complete an online survey. The social workers or social work students invited eligible parents to participate on the phone or when they visited the center. Participants were given a HKD$50 shopping coupon and a food allowance as compensation for their time. Only new clients of the center enrolled in 2024 were invited to participate in

this survey study (N = 274 in total).

Sample size calculation

There were five specific trauma-related variables we planned to test in the hierarchical multiple regression analyses (see Table 1). With five tested variables, assuming that there is an acceptable medium effect size (f2 = 0.15) for those variables, we tested the predictor values of the 5 items one by one (i.e., R2 increase in hierarchical multiple regression). With an 95% statistical power and a conservative two-tailed hypothesis based on a 0.05 alpha level, this study needed to have at least 138 participants in total. The power calculations were carried out using G*Power 3.1.9.7. Nevertheless, during the recruitment period, we tried to recruit as many participants as possible.

Sample characteristics

A total of 203 parents provided valid responses to our survey (response rate = 74.09%). Their mean age was 39.13 years old (SD = 6.50); 97.5% were female. Most (79.3%) reported living in a subdivided flat and 24.5% reported receiving the Comprehensive Social Security Assistance (CSSA) Scheme. When answering questions related to the child, the parents were instructed to consider the elder child only if there were more than one child aged below 18. According to the parents, the mean age of the children was 9.39 years old (SD = 4.06); 42.9% were female. The sample characteristics are reported in Table 1.

Measures

Participants completed the following validated self-report measures.

Brief Betrayal Trauma Survey (BBTS). The BBTS is a 24-item checklist which asks about 12 different types of interpersonal and non-interpersonal traumatic events that happened during childhood and adulthood with good reliability (Goldberg & Freyd, 2006). The BBTS has been used in the Chinese context with good reliability too (Fung et al., 2022). For each item, we assessed whether the participant endorsed (i.e., experienced at least once) the specific traumatic event. We calculated the number of childhood and adulthood traumatic event types endorsed by each participant. Higher endorsement indicated a greater number of traumatic event types experienced.

International Trauma Questionnaire (ITQ). The ITQ is an 18-item, reliable and valid screening tool for PTSD and complex PTSD symptoms (Cloitre et al., 2021; Cloitre et al., 2018). The ITQ was developed based on the ICD-11 framework for complex PTSD, as mentioned above. The ITQ has been widely used in epidemiological studies to make a provisional diagnosis of PTSD and complex PTSD (Hyland et al., 2020; Jowett et al., 2022). The Chinese version of the ITQ was found to be reliable and valid (Ho et al., 2019). Instead of using a cutoff score of the total score, the ITQ can make provisional diagnosis of PTSD and complex PTSD based on ICD-11 criteria (i.e., at least one symptom endorsed with a score ≥2 in each required symptom cluster, along with functional impairment). In addition, the ITQ can also provide two subscale scores (i.e., 'classical' PTSD and DSO symptoms) as

continuous variables. The scoring methods of the ITQ can be found at https://www.traumameasuresglobal.com/itq

The 5-item Somatoform Dissociation Questionnaire (SDQ-5). The SDQ-5 is a shortened version of the original 20-item SDQ, which is a reliable and valid measure of somatoform dissociative symptoms (Nijenhuis et al., 1997). The Chinese version of the SDQ-5 is available and a cutoff score of 9 has been recommended in a previous validation study (Fung et al., 2018).

Brief Parenting Scale (PS-7). The PS-7 is a 7-item scale based on the original parenting scale. The PS-7 is a reliable and valid Chinese measure of two specific forms of problematic parenting styles, namely laxness and over-reacting (Fung & Fung, 2020). The PS-7 does not have a cutoff score. Higher scores indicate more frequent use of the specific parenting style.

Child Behavior Checklist (CBCL). The CBCL is a comprehensive questionnaire which assesses child's behavioral problems as rated by the parent (Achenbach & Ruffle, 2000). The abbreviated CBSL, which has 13 items, can be used to measure both internalizing and externalizing symptoms of the child. The abbreviated CBSL has been validated in the Chinese context (Chan, Leung, et al., 2022; Chan, Wang, et al., 2022). The CBCL does not have a cutoff score. Higher scores indicate more behavioral problems.

Participants also answered questions about their demographic and health backgrounds.

Data analysis

SPSS 22.0 was used for statistical analysis. We first reported descriptive statistics. We then reported the results of Pearson and point-biserial correlation analyses of the relationships among major variables. After that, we conducted hierarchical multiple regression analyses to examine whether parents' trauma histories and trauma-related symptoms would be associated with problematic parenting styles (i.e., laxness and over-reacting) and children's behavioral problems, after controlling for potential confounding variables included in the present study (see Table 1). Assuming a medium effect size ($f^2 = .15$) in our multiple regression analysis, along with 80% statistical power using a conservative two-tailed hypothesis at a 0.05 alpha level, as we had 15 independent variables, this study required at least 139 participants. Power calculations were performed using G*Power 3.1.9.7.

Results

Prevalence

In this sample, 55.17% reported at least one traumatic event during lifetime on the BBTS (40.39% and 43.84% reported at least one childhood and adulthood traumatic event, respectively). The most commonly reported childhood traumatic events were natural disasters (BBTS Item 1; 16.7%) and witnessing someone who is not close committing suicide, being killed, or being severely injured (BBTS Item 3; 13.3%).

According to the BBTS and ITQ results, 5.42% met the ICD-11 criteria for probable

PTSD (3.4%) or complex PTSD (2.0%). On the SDQ-5, 2.0% screened positive for somatoform dissociation (SDQ-5 ≥ 9). In total, 6.90% had either or both probable PTSD/Complex PTSD and somatoform dissociation.

Relationships with parenting styles

We tested the hypotheses that trauma and trauma-related symptoms would be associated with problematic parenting styles. Hierarchical multiple regression analyses showed that parents' DSO symptoms were significantly associated with both laxness ($\beta = .278$, $p = .002$) and over-reacting ($\beta = .415$, $p < .001$), after controlling for a number of potential confounding variables (see Table 2).

Relationships with children's behavioral problems

A similar hierarchical multiple regression analysis was conducted to examine the relationship between parents' trauma and trauma-related symptoms and children's behavioral problems. As reported in Table 2, after controlling for potential confounding variables, childhood trauma was significantly associated with children's behavioral problems ($\beta = .257$, $p = .004$)(Step 2). When PTSD, DSO and somatoform dissociation symptoms were further entered into the model, childhood trauma ($\beta = .240$, $p = .003$) and DSO symptoms ($\beta = .402$, $p < .001$) were statistically significant predictors (Step 3).

Discussion

Although Hong Kong is an internationally advanced city, unaffordable housing and substandard living conditions are widely acknowledged social issues within this city (Lee et al., 2024). Therefore, it is important to better understand the mental well-being of the unprivileged groups and its potential impacts on the next generations. In this study, we provide important data regarding the prevalence of childhood and adulthood trauma, ICD-11 PTSD and complex PTSD, and somatoform dissociation among parents in disadvantaged housing and living conditions in Hong Kong. We found that 40.39% and 43.84% of participants, respectively, reported at least one childhood and adulthood traumatic event; 6.90% suffered from probable PTSD/Complex PTSD and/or somatoform dissociation. In addition, parents' DSO symptoms were associated with problematic parenting styles. Parents' childhood trauma and DSO symptoms were also associated with children's behavioral problems.

According to recent population-based studies, the lifetime prevalence rates of direct and indirect trauma are 64.8% and 88.7% in Hong Kong (Wu et al., 2019), while 5.9% of Hong Kong adults may have ICD-11 PTSD (1.7%) or complex PTSD (4.2%) (Ho et al., 2024). In our sample, the rate for lifetime trauma is slightly lower (55.17%), while the rate for ICD-11 PTSD and complex PTSD (5.42%) is comparable to the population rate. The results did not support our hypothesis that trauma and trauma-related disorders are particularly more prevalent in our sample of disadvantaged parents.

However, as hypothesized, parents' trauma-related symptoms, DSO symptoms in particular, are associated with problematic parenting styles, including over-reacting. Parents' childhood trauma and DSO symptoms are also associated with behavioral problems of the children as observed by the parents too. The findings point to the crucial importance of considering parents' trauma histories and mental health in order to safeguard and nurture the well-being of the next generation. Educators and health and social service providers need to be aware of the prevalence of trauma of patients in the community and its potent effects on parenting issues. To foster a healthy and positive environment for children to thrive, it is important to provide timely assessment and support to parents, particularly those who have been traumatized before. For example, it would be beneficial to incorporate regular trauma and mental health screenings in family service settings. In addition, expecting parents receiving prenatal care could be offered mental health screenings. If they report trauma experiences or exhibit mental health symptoms, it is important to provide them with access to mental health support so that we can prevent the potential negative impacts on their future children. Furthermore, in cases where teachers, educators, or childcare service providers notice emotional problems or behavioral difficulties in a child, it is crucial to consider the potential need for psychosocial or mental health support for the child's parents as well. This consideration is vital as the child's difficulties may, at times, be the result of unresolved parental or family issues.

The results could inform educators, child service providers, mental health practitioners, and policymakers regarding the public health significance of intergenerational trauma. The study has the strengths of using well-validated assessment tools and having a sample representative of all parents in the community center (response rate = 74.09%). However, this study also has some limitations. First, we relied on self-report data, even though self-report mental health assessments are reliable and valid and are widely used in epidemiological studies (Hyland & Shevlin, 2024). Importantly, although the CBCL is a reliable and valid measure and although proxy reports are commonly utilized in parent-child research, depending solely on parents' reports of children's problems could introduce bias. Future studies should collect data from diverse sources, including data provided by other observers (e.g., teachers) and directly from the children themselves. Second, while our sample is representative of all parents in the community center, it might not represent disadvantaged parents in Hong Kong. Replication studies in diverse populations are needed. Finally, this study relied on cross-sectional data, and further studies using longitudinal data are necessary to investigate the long-term effects of parents' trauma and mental health problems.

Taken together, despite its limitations, this study shows that, although trauma and trauma-related mental health problems are not particularly common in our sample of socio-economically disadvantaged parents, their trauma-related symptoms are significantly associated with problematic parenting styles and children's behavioral problems. More

attention to the intergenerational effects of trauma is necessary from a public mental health perspective.

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Table 1. Sample characteristics (N = 203)

Variables	Descriptive statistics		Correlations		
	Mean (SD)	Percentage	Parenting style: Laxness	Parenting style: Over-reacting	Children's behavioral problems
Age	39.13 (6.50)		.088	-.001	-.055
Gender (Female)		97.5%	-.107	-.047	.074
Undergraduate degree		3.4%	.008	-.043	-.007
Married		76.4%	-.031	.006	-.059
Full-time employed		5.9%	.021	-.056	.011
Seeing a psychiatrist (past 12 months)		7.4%	.046	.084	.267***
Number of children	1.73 (0.71)		.066	-.009	-.046
Child's age	9.39 (4.06)		.082	-.017	-.037
Child's gender (female)		42.9%	.027	.012	-.063
Child with any disabilities		17.2%	-.046	.175*	.287***
Childhood trauma	0.89 (1.50)		.020	.173*	.386***
Adulthood trauma	0.87 (1.42)		.088	.122	.265***
PTSD symptoms	4.60 (4.62)		.098	.227**	.327***
DSO symptoms	4.99 (4.72)		.222**	.393***	.490***
Somatoform dissociative symptoms	5.15 (1.40)		.087	.046	.089

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 2. Relationships with parenting styles and children's behavioral problems (N = 203)

	Parenting style: Laxness			Parenting style: Over-reacting			Children's behavioral problems		
	Step 1 (β)	Step 2 (β)	Step 3 (β)	Step 1 (β)	Step 2 (β)	Step 3 (β)	Step 1 (β)	Step 2 (β)	Step 3 (β)
Age	-.043	-.039	-.056	.002	.026	.000	-.072	-.019	-.052
Gender (Female)	-.099	-.096	-.105	-.066	-.066	-.068	.077	.078	.080
Undergraduate degree	.012	.013	.027	-.035	-.023	.006	.009	.036	.068
Married	-.020	-.007	.031	.013	.034	.099	-.064	-.020	.045
Full-time employed	-.003	.000	.010	-.048	-.056	-.031	.040	.023	.057
Seeing a psychiatrist (past 12 months)	.052	.058	.008	.043	.009	-.070	.218**	.143*	.059
Number of children	.029	.037	.054	-.010	-.010	.021	-.041	-.040	-.018
Child's age	.093	.078	.071	.002	-.009	-.024	.028	.004	-.011
Child's gender (female)	.022	.020	.018	.029	.014	.011	-.028	-.060	-.062
Child with any disabilities	-.040	-.044	-.056	.167*	.135	.114	.233**	.163*	.149*
Childhood trauma		-.057	-.056		.118	.103		.257**	.240**
Adulthood trauma		.111	.077		.034	-.036		.072	-.015
PTSD symptoms			-.082			-.024			.034
DSO symptoms			.278**			.415***			.402***
Somatoform dissociative symptoms			.051			.021			.071
R^2	.025	.033	.087	.041	.057	.192	.142	.217	.373
Adjusted R^2	-.025	-.028	.014	-.009	-.003	.127	.097	.167	.322
F	0.499	.540	1.189	0.817	0.953	2.958***	3.169**	4.386***	7.407***
ΔR^2	.025	.088	.054	.041	.016	.135	.142	.075	.156
ΔF	0.499	0.751	3.690*	0.817	1.607	10.411***	3.169**	9.128***	15.479***

* $p < .05$ ** $p < .01$ *** $p < .001$