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Pathways from conflict-related trauma and ongoing adversity to posttraumatic stress disorder symptoms amongst West Papuan refugees: The mediating role of anxiety and panic-like symptoms

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Abstract

Background: Although the relationship involving exposure to traumatic events (TEs), conditions of adversity, and posttraumatic stress disorder (PTSD) is well established in the refugee field, the psychological factors mediating the relevant pathways are not as clearly delineated. In the present path analysis, we examined a model in which anxiety and panic-like symptoms mediated the path between conflict-related TEs, ongoing adversity, and PTS symptoms amongst 230 refugees from West Papua.
Methods: Culturally adapted measures were applied to assess TE exposure, ongoing adversity, anxiety, panic-like, PTS, and depressive symptoms.
Results: Our model identified two pathways leading from conflict-related exposure to PTS symptoms, one a direct path, the other mediated by a sequence of ongoing adversity, anxiety and panic-like symptoms. Older refugees from West Papua had higher levels of anxiety and panic-like symptoms than the younger adult generation born in PNG.
Conclusions: Our findings suggest that a focus on reducing anxiety and panic together with addressing social deprivations and threats may improve anxiety and panic amongst refugees, ultimately improving outcomes for PTS symptoms.

1. Introduction

Research in the refugee mental health field has found consistent links involving the traumatic events (TEs) of conflict, conditions of ongoing adversity, and posttraumatic stress (PTS) symptoms [1,2]. Nevertheless, questions remain about the relative importance of conflict-related TEs as opposed to post-conflict adversity in the genesis and/or maintenance of PTS symptoms [3]. In addition, there is a need to clarify the intervening psychological responses that mediate these relationships [4]. We draw on data obtained from a sample of West Papuan refugees resettled in Papua New Guinea (PNG) to test whether symptoms of anxiety and panic mediate the relationship of TEs, ongoing adversity and PTS symptoms.

Refugees are subject to a wide range of stresses that are likely to generate high levels of anxiety. For many, the post-migration environment is characterized by conditions of insecurity, uncertainty about the future, and concerns for the safety and sustenance of family members [5–8]. A meta-analysis of the literature identified a range of post-migration factors that protect refugees from PTS and related symptoms including secure residency, access to employment, and sufficient material aid from host governments and non-government agencies. Where these protective factors are absent, refugees experience higher levels of general distress including symptoms of anxiety, in addition to elevated PTS symptoms. As yet, however, little is known about the pathways linking ongoing adversity, anxiety and PTS symptoms amongst refugee populations.

There is growing evidence from research in the general field of psychiatric traumatology that symptoms of panic are commonly comorbid with PTS symptoms [9,10]. Panic and PTSD overlap in half to two thirds of patients attending services for trauma treatment and counselling [11], the pattern of comorbidity being somewhat lower but still

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statistically significant in general population samples [12]. In addition, there is evidence that trauma exposure may be implicated in the genesis and maintenance of the comorbid pattern [13]. There also is evidence that the occurrence of symptoms of panic at the time of trauma exposure [14,15] and in the early aftermath, for example following accidents and injuries in civilian life, indicates risk for both acute stress disorder (ASD) and future PTSD [9,16].

Only a limited number of studies in the refugee mental health field have included an assessment of panic symptoms. An inquiry amongst war-affected Iraqi refugees in the USA found that those most recently exposed to war trauma experienced high rates of comorbid panic, PTSD, anxiety and depressive symptoms [17]. A clinic study amongst Vietnamese refugees found a high prevalence of panic attacks (manifesting in symptoms of orthostatic dizziness, headaches, palpitations, gastrointestinal discomfort) related to life threats encountered in the post-migration environment [18]. In addition, in the same clinic, Cambodian refugees demonstrated a comorbid pattern of panic-like symptoms, anxiety and PTS symptoms [19]. Clinical impressions suggested that anxiety and panic-like symptoms mediated the association between experiences of past persecution and trauma and PTS symptoms [20,21]. There are no studies in the refugee field, however, applying appropriate statistical methods to investigate possible pathways linking TEs, anxiety, panic and PTS symptoms. In testing such models, it is important to consider the role of depressive symptoms which are common amongst refugees, given that these symptoms are known to be linked to trauma exposure and adversity [22], and to exhibit comorbidity with anxiety and PTS symptoms [23].

The background of trauma exposure and extreme conditions of insecurity and deprivation in the post-settlement environment experienced by West Papuan refugees in Port Moresby, Papua New Guinea, presented an opportunity to assess the roles of anxiety and panic-like symptoms in pathways leading to PTS symptoms. West Papuans have been exposed to extensive traumatic events (TEs) of conflict since their homeland (which occupies the western half of the New Guinea landmass) was invaded and occupied by Indonesia in 1963. During the longstanding low-grade resistance war that has ensued, repeated allegations have been made of extensive human rights abuses perpetrated by the occupying military against the indigenous people [24,25]. Alleged violations include extra-judicial arrests, torture, sexual violence, murder of family, atrocities, burning of whole villages, and mass displacement of populations from their traditional lands [26].

The Port Moresby West Papuan refugee community arrived in waves of migration commencing in the 1980s. Most refugees live in shanty towns ("settlements") as stateless persons with no rights to citizenship, land tenure or ownership. Poverty is widespread, and there are few opportunities for West Papuans to engage in education or employment. Our contact and consultations with the community suggest that widespread concerns about the safety of family in the settlements, extreme poverty and lack of services together generate high levels of anxiety amongst the refugee population [27].

In the present study, we apply path analysis to cross-sectional data obtained from West Papuan refugees in order to test a theoretical model that includes anxiety and panic-like symptoms as intermediary steps in the relationships involving the TEs of past conflict, ongoing adversity and PTS symptoms. We first test the conventional baseline model to establish whether ongoing adversity mediates the relationship between conflict-related TEs and PTS symptoms [3]. We then examine the comprehensive model in which indices of anxiety and panic-like symptoms are added as intermediary steps in the relationship of TEs, ongoing adversity and PTS symptoms. We also test for a model that includes depressive symptoms as a prior step to PTS symptoms. Finally, we examine alternative models in which panic and depressive symptoms are each substituted for PTS symptoms as the end point.

2. Methods

2.1. Sample

We conducted the survey amongst West Papuan refugees residing in six settlements in Port Moresby, Papua New Guinea (PNG). In the absence of census data identifying members of this minority community within the larger population of PNG nationals, a targeted sampling approach was applied. In the first instance, based on all available sources of information (community leaders, government officials, international organizations, local university staff, and the United Nations High Commissioner for Refugees), we identified localities in which West Papuan refugees were concentrated. The six identified settlements are Hohola, Rainbow, Six-Mile, Eight Mile, Nine-Mile, and Tokarara/Waigani, communities characterized by high density, makeshift housing, and few facilities. Based on all sources of information, we estimated that 250 adults (90% of West Papuan refugees living in Port Moresby) resided in these settlements. In the second step, the study team mapped the location of adult refugees within the settlements based on the information already gathered and a comprehensive survey involving door-to-door inquiries, a procedure coordinated by a West Papuan research assistant (MK) from Australia who had long-term contact with the community. Of the 250 eligible respondents, we were unable to contact 20 persons who had dispersed to other areas of Port Moresby or further afield, yielding a response rate from the identified pool of 92%.

2.2. Measures

2.2.1. Exposure to conflict-related traumatic events

We assessed exposure to conflict-related traumatic events (TEs) using an inventory of 22 items (rated as experienced or not experienced) complied and adapted to the historical