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The impact of immigration detention on the mental health of refugees and asylum seekers

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Abstract

Studies consistently report that asylum seekers held in immigration detention have relatively high rates of mental distress, yet evidence of the long-term impact of immigration detention is limited. Using propensity score–based methods, we estimated the impact of immigration detention on the prevalence of nonspecific psychological distress, using the Kessler-6, and probable posttraumatic stress disorder (PTSD), using the PTSD-8, among participants in a national sample of asylum seekers in the 5 years following their resettlement in Australia ($N = 334$). At Wave 1, the prevalence of nonspecific psychological distress was high among all participants regardless of detainment status, $OR = 0.28$, 95% CI [0.04, 2.06], and did not change over time for either detainees ($n = 222$), $OR = 1.01$, 95% CI [0.46, 2.18], or nondetainees ($n = 103$), $OR = 0.81$, 95% CI [0.39, 1.67]. In contrast, the odds of probable PTSD were significantly higher for former detainees, $OR = 8.20$; 95% CI [2.61, 26.73], than nondetainees at Wave 1; although they declined among former detainees, $OR = 0.56$, 95% CI [0.38, 0.82]), and increased among nondetainees, $OR = 1.57$, 95% CI [1.11, 2.23], in the years following resettlement. These results imply the use of immigration detention to manage unauthorized migration increases the prevalence of probable PTSD in the short term among former detainees who have resettled in Australia.

There are now more people displaced by war and violence than at any point since the end of World War II, with most of these individuals residing in low- and middle-income countries (United Nations High Commissioner for Refugees, 2019). A minority have also sought refuge further afield, often defying immigration controls to enter high-income countries as asylum seekers. Those countries have responded with a range of migration control and deterrence strategies, including restricting access to travel documents, imposing financial penalties on carriers that fail to enforce immigration controls, and immigration detention (Steel et al., 2011).

Of these approaches, the detention of asylum seekers has been widely criticized as unjust and in violation of international norms (Goodwin-Gill, 1986; Grange & Majcher, 2017). Critics also point to the adverse effects of detention on the mental health of vulnerable refugees (Silove et al., 2007; Von Werthern et al., 2018). Like other forms of imprisonment, immigration detention entails confinement, the loss of individual freedom, and isolation from family and support (Silove et al., 2007). Detention may be protracted, with some people held for years waiting for claims to be processed (Steel et al., 2004). The detention environment may exacerbate the effects of preexisting mental health conditions that stem from premigration experiences (Becker & Silove, 1993), and uncertainty about migration claims may compound feelings of insecurity and fears of repatriation.

Detained and formerly detained asylum seekers have been shown to report high rates of mood and anxiety disorders, including posttraumatic stress disorder (PTSD; Becker & Silove, 1993; Robjant et al., 2009; Salinsky, 1997; Steel et al., 2004; Von Werthern et al., 2018). Previous research has also demonstrated associations between immigration detention and the deterioration of mental health among detainees (Coffey et al., 2010; Mares & Jureidini, 2004; Sultan & O'Sullivan, 2001). Further, mood and anxiety disorders are more prevalent among former detainees than other asylum seekers (Green & Eagar, 2010; Ichikawa et al., 2006; Von Werthern et al., 2018). The length of detention also correlates with the severity of mental health problems (Robjant et al., 2009; Steel et al., 2006; Von Werthern et al., 2018). Asylum seekers who have been released from detention also report less mental distress than those who remain in detention, which could imply detainees' mental health improves following release (Keller, Ford, et al., 2003; Keller, Rosenfeld, et al., 2003).

Despite these findings, evidence of the impact of immigration detention on the short- and long-term impairment of asylum seekers has been limited by several methodological challenges. Most studies to date have relied on patient case studies or small nonrepresentative samples selected for treatment because of their elevated rates of mental distress (Coffey et al., 2010; Mares & Jureidini, 2004). Others have recruited participants through snowball sampling techniques (Steel et al., 2006), which can increase statistical dependence among participants and bias estimates of the effects of immigration detention (e.g., if people refer individuals they met in detention or through a support service). Most studies have also been cross-sectional (Robjant et al., 2009; Von Werthern et al., 2018; see Keller, Rosenfeld, et al., 2003; Steel et al., 2011 for exceptions), making it difficult to exclude the possibility that the detainees surveyed experienced higher levels of mental distress before their detention, an important limitation given the high rates of trauma exposure in refugee samples (Johnson et al., 2008). It has also prevented investigation of the long-term impact of detention; meanwhile, studies of former detainees have reached different conclusions about the duration of its impact, suggesting that distress could either increase (Steel et al., 2011) or decline (Keller, Rosenfeld, et al., 2003) in the aftermath of detention.

Finally, no study to date has sought to account for the fact that selection into immigration detention is not random by modeling that process or controlling for its impact (Filges et al., 2018; Robjant et al., 2009; Verhülsdonk et al., 2021; Von Werthern et al., 2018). Immigration authorities may select people for detention based on any number of characteristics that also increase their risks of mental distress, such as one's national origin, cultural background, or socioeconomic status (Chen et al., 2017). Without adjusting for these selection processes, estimates of the association between detention and mental health may be biased even in analyses that include those factors as covariates (Rosenbaum & Rubin, 1983).

In this study, we investigated the impact of immigration detention on mental distress among formerly detained asylum seekers who resettled in Australia. Australia provides an important context to evaluate the impact of immigration detention because of its widespread use and promotion of the practice (Phillips & Spinks, 2013; Conlon et al., 2017) and because much of the research on the health consequences of detainment has been based in Australia (Filges et al., 2018; Robjant et al., 2009; Verhülsdonk et al., 2021; Von Werthern et al., 2018). Under the Migration Act, any noncitizen found in Australia without a valid visa must be detained, irrespective of their individual circumstances (Migration [Australia] Act 1958, s.189). Thus, anyone who attempts to enter Australia without valid authorization is subject to automatic detention. In this study, we aimed to answer two questions: (a) how does immigration detention affect mental distress among asylum seekers following resettlement, and (b) do the effects of detention continue beyond release? Using a "doubly robust" propensity score approach in which we adjusted for individual-level differences in the probability of being detained, we analyzed the results of a longitudinal, national survey of refugees and asylum seekers to estimate the contribution of detention to mental distress among former detainees throughout the first 5 years of resettlement.

METHOD

Participants and procedure

We analyzed the results of Building a New Life in Australia: The Longitudinal Study of Humanitarian Migrants (BNLA). BNLA is a national longitudinal survey of recently arrived refugees who were granted asylum in Australia (Edwards et al., 2018; Rioseco et al., 2017). The sample was selected at random from the Australian Government's settlement database, which comprises information on all refugees and asylum seekers settled under the humanitarian migration program. All respondents had received a permanent protection visa, which entitled them to live, work and study in Australia permanently. The Australian Government classifies refugees and asylum seekers as either "offshore" or "onshore" migrants, depending on whether they sought protection before (i.e., offshore) or after (i.e., onshore) arriving in the country. People can apply for asylum as either a primary applicant or as the secondary applicant to and dependent of another family member, who is then listed as the primary applicant on the application. All offshore applicants, including both primary and secondary applicants, who arrived in Australia between May and December 2013, and all onshore migrants who were granted permanent protection in the same period were eligible to participate in the survey (Rioseco et al., 2017).

Of the eligible individuals, 2,769 primary applicants were contacted at random and invited to take part in the survey. They were also invited to recruit any secondary applicants 15 years of age and older who were also listed on their visa application into the study. Respondents comprised 1,509 primary applicants and 890 secondary applicants (Edwards et al., 2018; Rioseco et al., 2017). Computer-assisted survey interviews (CASI) were conducted in person between October 2013 and February 2014 (Wave 1). Four annual follow-up interviews were held in subsequent years, alternating between telephone (Waves 2 and 4) and in-person (Waves 3 and 5) CASIs. The survey was translated into 14 languages and administered by trained multilingual interviewers employed by an international research company contracted by the Australian Government (Edwards et al., 2018; Rioseco et al., 2017). Retention was high, with an average of approximately 81% of Wave 1 respondents reinterviewed in Waves 2, 3, and 4 (Rioseco et al., 2017).

Generally, only onshore applicants were eligible for and likely to have experienced detention at the time of the survey, as most had arrived in Australia without a valid visa, in contrast to offshore applicants, who received a visa before entering Australia. For that reason, we restricted the analyses to onshore migrants who were listed as the primary applicant on their visa application (N = 334). A total of 234 of these individuals had arrived in Australia by boat without prior authorization and were classified by the Australian Government as "unauthorized maritime arrivals" (UMAs). The remaining onshore migrants had traveled to Australia by other means ($n = 100$). Two thirds of participants had spent time in immigration detention before they were granted protection ($n = 227$; 68.0%), all of whom were UMAs. We excluded secondary applicants from consideration because almost all onshore migrants had traveled to Australia without dependent family members and were named as the sole applicant on their visa application.

The minimum analytical sample comprised 273 (81.7%) respondents who completed the Wave 1 interview and at least one other follow-up interview and who also had full data on variables of interest. Muslims; refugees from Afghanistan, Iran, and Pakistan; and individuals who had been exposed to war and violence were overrepresented in the analytical sample, as were respondents with limited formal schooling. By contrast, recent arrivals, Christians, and individuals who had completed 12 or more years of schooling were underrepresented in the estimation sample. We controlled for these and other background characteristics in all analyses.

Note that all onshore primary applicants invited to participate in the study had already been granted permanent protection in Australia. This is a notable limitation as it prevented us from evaluating the impact of immigration detention on people whose claims for protection were rejected. Individuals who were denied a visa may have experienced more severe and prolonged mental distress than those who were allowed to remain. We also could not assess the consequences of immigration detention outside Australia. Thus, we were only able to estimate the impact of detention on mental distress among formerly detained asylum seekers who were subsequently granted the right to live, work, and study in Australia. This is also a notable limitation because the Australian Government reintroduced offshore processing in the latter half of 2013 and began deporting all UMAs to neighboring countries, where they were held in offshore detention facilities (Karlsen & Phillips, 2014).

Measures

Mental distress

We measured the primary outcome, mental distress, using two dichotomous variables. Nonspecific psychological distress is derived from the Kessler–6 Psychological Distress Scale (K6; Kessler et al., 2003, 2010), a shortened version of the Kessler–10 self-report scale, which aims to discriminate between clinically significant and nonsignificant levels of nonspecific psychological distress. Respondents were asked to indicate how frequently they had experienced six different symptoms of psychological distress in the previous 30 days (e.g., "How often did you feel so sad nothing could cheer you up?"), rating their responses on a scale of 1 (*none of the time*) to 5 (*all of the time*). Scores were summed, and respondents with scores of 19 or higher were categorized as having probable nonspecific psychological distress, coded as 1 for "yes" (i.e., scores of 19 or higher) and 0 for "no" (i.e., scores below 19); this was the first of our dependent variables. The K6 has been shown to be highly correlated with other screening tools for mental distress, including the Structured Clinical Interview for *DSM-IV*, and has demonstrated correlations with measures of serious mental illness, such as health-related quality of life (Fleishman & Zuvekas, 2007; Furukawa et al., 2003; Kessler et al., 2003). The K6 has been used effectively across diverse cultural contexts and has demonstrated high reliability among BNLA respondents (Chen et al., 2017; Kang et al., 2015). In the estimation sample, Cronbach's alpha values ranged from .85 to .87.

PTSD symptoms

A probable PTSD diagnosis was derived from the PTSD-8 (Hansen et al., 2010), an eight-item, self-report measure of PTSD symptoms related to intrusions, avoidance, and hypervigilance, as outlined in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 2000). The PTSD-8 is derived from Part IV of the Harvard Trauma Questionnaire (Kleijn et al., 2001; Mollica et al., 1992), a widely translated and widely used scale with strong cross-cultural validity. Respondents were asked to indicate the frequency of eight PTSD symptoms in the previous week, rating responses on a scale of 1 (*not at all*) to 4 (*most of the time*). Participants who endorsed experiencing at least one symptom of intrusion, avoidance, or hypervigilance with a score of 3 (*some of the time*) or 4 (*most of the time*) were classified as likely having probable PTSD, with scores coded as 1 for "yes" and 0 for "no" (Hansen et al., 2010). The reliability and validity of the PTSD-8 has been established among diverse samples, including BNLA respondents (Chen et al., 2017; Hansen et al., 2010). In the estimation sample, Cronbach's alpha values ranged from .89 to .93.

Detention

Detention, the key explanatory variable, indicated whether respondents had been in an immigration detention center since arriving in Australia, with scores coded as 1 for "yes" and 0 for "no." In all cases, detention occurred prior to the Wave 1 survey interview and before respondents were granted permanent protection in Australia.

Demographic and premigration characteristics

We controlled for factors likely to affect mental distress and the probability of detention in all analyses. We included age, which was measured in years and ranged from 18 to 75 (M = 33.70, SD = 10.64); sex (1 = male, 0 = female), and marital status (1 = married or partnered, 0 = not married or partnered). We also included two indicators of religious identity to differentiate respondents who were Christian (1 = yes, 0 = no) or Muslim (1 = yes, 0 = no) as well as four mutually inclusive indicators of whether they had been born in or had lived in Afghanistan, Iraq, Iran, or Pakistan—countries that accounted for most onshore applicants for asylum—each coded as 1 for "yes" and 0 for "no." We measured education as the highest level of educational attainment, using several dichotomous variables indicating whether respondents reported having 6 years or less, 7–9 years, 10–11 years, or 12 or more years of schooling; a trade certification; or had completed a university degree; all variables were coded as 1 for "yes" and 0 for "no."

We also included the average of four items assessing how well respondents reported being able to speak, read, and write English and understand its spoken form. Responses were recorded on a 4-point scale ranging from 1 (*very well*) to 4 (*not at all*), with total English proficiency ranging from 1 to 4 and higher scores indicating lower levels of proficiency (M = 2.98, SD = 0.91). In the present sample, Cronbach's alpha for this measure was .96. In addition, participants reported how well they were able to read and write in their primary language (two items). Responses were recorded on a four-point scale ranging from 1 (*very well*) to 4 (*not at all*), with scores averaged and lower scores reflecting higher levels of literacy (M = 1.81, SD = 0.96).

Additionally, we included several dichotomous indicators of premigration experiences, including whether respondents had been exposed to war, violence, imprisonment, persecution, natural disasters, or significant substantial material deprivation, each coded as 1 for "yes" and 0 for "no," prior to their arrival in Australia. Respondents who reported having lived in one or more refugee camps were also identified (1 = yes, 0 = no), as were respondents who paid someone to travel to Australia (1 = yes, 0 = no). We also included two indicators of whether the respondent listed among the reasons for coming to Australia (a) the ease of migration to Australia (1 = yes, 0 = no) or (b) having family or friends in the country (1 = yes, 0 = no). Finally, we included a measure of whether respondents had been living in Australia for 2 or more years (1 = 2 years or more, 0 = less than 2 years). Sample demographic and premigration characteristics are provided in Table 1.

Data analysis

We used inverse probability weighting with regression adjustment to estimate the average effect of detention on former detainees (i.e., the average treatment effect on the treated; ATET). In contrast to other studies that did not adjust for selection into detention, this approach enabled us to model detention as a function of demographics and premigration characteristics and use the results of that analysis to compare detainees to asylum seekers who had similar probabilities of being detained but were not detained. In doing so, we sought to imitate the conditions of an experimental design, estimating the

TABLE 1 Participant characteristics

Variable	*n*	%	*M*	*SD*	*N*	Range
Nonspecific psychological distress	280	87.23			321	
Probable PTSD	85	27.16			313	
Detained	222	68.31			325	
Age (years)			33.84	10.93	334	18–75
Male sex	292	87.43	—	—	334	
Married	195	58.38	—	—	334	
Religion						
Christian	58	18.24	—	—	318	
Muslim	243	76.42	—	—	318	
Country of origin						
Afghanistan	128	38.32	—	—	334	
Iraq	25	7.49	—	—	334	
Iran	102	30.54	—	—	334	
Pakistan	133	39.82	—	—	334	
PTE exposure						
Material deprivation	68	20.36	—	—	334	
War	187	55.99	—	—	334	
Violence	105	31.44	—	—	334	
Imprisonment	65	19.46	—	—	334	
Persecution	203	60.78	—	—	334	
Disaster	31	9.28	—	—	334	
Refugee camps	21	6.56	—	—	325	
Paid to migrate	262	78.44	—	—	334	
Opportunities in Australia	214	64.07	—	—	334	
Ties to Australia	176	52.69	—	—	334	
English proficiency	—	—	2.95	0.91	332	1–4
Education						
None	36	10.91	—	—	330	
< 6 years	62	18.79	—	—	330	
7–9 years	41	12.41	—	—	330	
10–11 years	37	11.21	—	—	330	
≥ 12 years	62	18.79	—	—	330	
Trade certification	19	5.76	—	—	330	
University	73	22.12	—	—	330	
Ability to read and write	—	—	1.79	0.94	316	1–4
Previously employed	258	77.71	—	—	332	
Years in Australia	72	21.56	—	—		

Note: PTSD = posttraumatic stress disorder; PTE = potentially traumatic event.

ATET as the difference in the odds of experiencing mental distress between former detainees and nondetained asylum seekers conditional on detention. We used regression adjustment to provide additional assurance by holding the effects of residual differences between detainees and nondetainees constant in the analyses.

We began by estimating the probability of detention among asylum seekers, controlling for all independent variables, as reported in the Supplementary Materials. We then regressed mental distress across the five waves of the study on detention in weighted longitudinal mixed-effects logistic regression analyses (Skrondal & Rabe-Hesketh, 2004). These analyses were conducted in Stata (Version 15) using the *melogit* command. For nondetained asylum seekers, the weights were equal to the inverse probabilities of detention based on the results of the logistic regression analysis. In contrast, we weighted assigned former detainees equally (i.e., by one). In this "doubly robust" method, in which we also controlled for the factors on which detainees and nondetained differed, the estimated effect of detention was unbiased provided that either the regression adjustment model or the logistic regressions of detention were specified correctly (Wooldridge, 2010).

Other than time, which was measured in years since the first wave, all independent variables were recorded at Wave 1. We began by regressing the measures of distress on all independent variables excluding detention (Model 1) before estimating an expanded model to which we added detention and a Time x Detention interaction term (Model 2). The interaction was added to test whether changes in mental distress differed between detained and nondetained asylum seekers. Thus, the odds ratios (*OR*s) for detention in Model 2 describe the estimated effect of detention on former detainees at Wave 1, whereas the interaction between time and detention describes changes in those effects in the years following resettlement. Finally, we compared the Aikake information criterion (AIC) and Bayesian information criterion (BIC) for Model 1 and Model 2 to assess whether controlling for detention, including differences in the rate of change between detainees and nondetainees, improved model fit.

RESULTS

The prevalence of nonspecific psychological distress among asylees was high at Wave 1 ($M = 0.87$, $SD = .033$, $N = 321$), Wave 2 ($M = 0.89$, $SD = 0.31$, $N = 276$), Wave 3 ($M = 0.88$, $SD = 0.32$, $N = 219$), and Wave 4 ($M = 0.89$,0.31, $N = 212$). Although the prevalence appeared to decrease slightly at Wave 5 ($M = 0.84$, $SD = .36$, $N = 199$), at no point did the prevalence of nonspecific psychological distress fall below 84%. In contrast, fewer than one third of respondents reported symptoms consistent with probable PTSD at Wave 1 ($M = 0.27$, $SD = 0.45$, $N = 313$). The prevalence of probable PTSD also varied over time. Specifically, the prevalence increased in Wave 2 ($M = 0.16$, $SD = 0.37$, $N = 269$), decreased in Wave 3 ($M = 0.22$, $SD = 0.42$, $N = 213$), and increased again in Wave 4 ($M = 0.15$, $SD = 0.35$, $N = 212$) before falling in Wave 5 ($M = 0.21$, $SD = 0.41$, $N = 197$).

Table 2 shows the results of the multivariate longitudinal analyses of mental distress. These analyses adjusted for the independent variables (Model 1) together with detention and its interaction with time (Model 2). The results for Model 1 reflect the patterns already described. Neither nonspecific psychological distress, $OR = 0.81$, 95% confidence interval (CI) [0.64, 1.03], nor probable PTSD, $OR = 1.00$, 95% CI [0.85, 1.17], decreased (or increased) linearly as a function of time. As these results do not account for the potential impact of immigration detention on distress, however, they could obscure important differences between former detainees and nondetainees either in their initial levels of nonspecific psychological distress at Wave 1 or their rates of change (i.e., between Wave 1 and Wave 5).

The results of Model 2 describe estimated changes in mental distress and the likely effects of immigration detention. At Wave 1, the average effect of detention on nonspecific psychological distress among former detainees was indistinguishable from zero, $OR = 0.28$, 95% CI [0.04, 2.06]. Detention also did not seem to alter the odds of experiencing psychological distress in subsequent years: The prevalence of distress did not change for former detainees, $OR = 1 .01$, 95% CI [0.46, 2.18], or their counterparts, $OR = 0.81$, 95% CI [0.39, 1.67], as the confidence intervals surrounding our estimates spanned negative and positive values. The model selection criteria confirmed these results. The AIC value was not appreciably lower for Model 2, which included detention and the Time x Detention interaction term, than for Model 1, whereas the value of the BIC was lower for Model 1. Thus, controlling for possible differences between former detainees and nondetainees in their initial levels of distress and rates of change did not efficiently increase the explained variance of the model.

In contrast, Table 2 shows that detention had a large and positive effect on PTSD, increasing the odds of probable PTSD more than 7 times among former detainees, $OR = 8.20$, 95% CI [2.61, 26.73]. Given the minimum confidence interval value, even conservatively, we estimate that detention doubled the chances of former detainees experiencing probable PTSD at Wave 1. With each additional year, however, the prevalence of probable PTSD declined among former detainees, $OR =.56$, 95% CI [0.38, 0.82), whereas it increased among comparable nondetainees, $OR = 1.57$, 95% CI [1.11, 2.23]. The model fit statistics (i.e., AIC and BIC values) also point to the influence of detention on probable PTSD. Both were lower for Model 2 than in Model 1, which would indicate that controlling for detention and the Time x Detention interaction increased the explained variance and improved model fit efficiently.

Figures 1 and 2 illustrate the predicted probabilities of experiencing nonspecific psychological distress (Figure 1) and probable PTSD (Figure 2) for hypothetical detained and nondetained asylum seekers in the first 5 years of settlement. The probabilities were derived from the analyses reported in Table 2 after holding all other variables at their means. Former detainees had similar risks of nonspecific psychological distress as other asylum seekers from Wave 1 to Wave 5, with the imprecision of estimates, as shown by their wide confidence intervals, obscuring any difference between them. Almost all asylum seekers had scores indicating nonspecific psychological distress at Wave 1 ($n = 240$, 88%), and these patterns did not seem to improve with

TABLE 2 Mixed-effects logistic regressions of mental distress on detention

	Nonspecific psychological distress				Probable PTSD			
	Model 1		Model 2		Model 1		Model 2	
Variable	*OR*	95% CI	*OR*	95% CI	*OR*	95% CI	*OR*	95% CI
Time	0.81	[0.64, 1.03]	0.81	[0.39, 1.67]	1.00	[0.85, 1.17]	1.57*	[1.11, 2.23]
Detained			0.28	[0.04, 2.06]			8.20***	[2.61, 25.73
Detained x Time			1.01	[0.46, 2.18]			0.56**	[0.38, 0.82]
Age	0.97	[0.92, 1.02]	0.96	[0.92, 1.01]			1.04*	[1.01, 1.08]
Male sex	1.17	[0.31, 4.44]	1.24	[0.35, 4.34]	0.55	[0.22, 1.39]	0.53	[0.23, 1.21]
Married	1.07	[0.28, 4.09]	0.96	[0.28, 3.30]	1.01	[0.45, 2.25]	1.04	[0.48, 2.25]
Country of origin								
Afghanistan	2.76	[0.80, 9.52]	2.88	[0.88, 9.38]	0.32**	[0.15, 0.69]	0.32**	[0.15, 0.68]
Iraq	0.25	[0.04, 1.58]	0.31	[0.05, 1.82]	5.14***	[2.00, 13.23]	4.50**	[1.71, 11.83]
Iran	0.49	[0.16, 1.51]	0.57	[0.20, 1.65]	1.62	[0.80, 3.27]	1.44	[0.71, 2.91]
Pakistan	1.03	[0.29, 3.60]	0.91	[0.29, 2.88]	2.10	[0.94, 4.69]	2.12	[0.97, 4.65]
PTE exposure								
Material deprivation	2.62	[0.66, 10.29]	2.19	[0.60, 8.07]	1.64	[0.84, 3.18]	1.87	[0.94, 3.71]
War	1.50	[0.51, 4.37]	1.47	[0.51, 4.21]	0.41*	[0.21, 0.81]	0.39*	[0.19, 0.80]
Violence	0.78	[0.26, 2.31]	0.62	[0.22, 1.73]	1.59	[0.77, 3.29]	1.91	[0.93, 3.90]
Imprisonment	0.55	[0.12, 2.62]	0.72	[0.17, 3.07]	2.72*	[1.04, 7.09]	2.62*	[1.05, 6.55]
Persecution	0.95	[0.36, 2.51]	0.84	[0.34, 2.09]	1.03	[0.51, 2.05]	1.13	[0.57, 2.25]
Disaster	4.30	[0.49, 37.51]	4.65	[0.58, 37.27]	0.56	[0.17, 1.86]	0.44	[0.14, 1.41]
Refugee camps	0.23	[0.05, 1.00]	0.27	[0.06, 1.21]	2.83*	[1.14, 6.99]	2.79*	[1.05, 7.38]
Paid to migrate	0.19*	[0.04, 0.97]	0.30	[0.07, 1.38]	1.72	[0.68, 4.38]	1.33	[0.55, 3.20]
Opportunities in Australia	1.93	[0.61, 6.16]	2.10	[0.70, 6.33]	0.57	[0.30, 1.09]	0.54*	[0.28, 1.05]
Ties to Australia	2.34	[0.94, 5.80]	2.22	[0.92, 5.38]	0.55*	[0.31, 0.95]	0.54	[0.31, 0.96]
English proficiency	1.60	[0.90, 2.85]	1.67	[0.96, 2.91]	1.27	[0.81, 1.99]	1.27	[0.82, 1.96]
Education								
< 6 years	1.30	[0.30, 5.70]	1.17	[0.28, 4.98]	0.57	[0.23, 1.41]	0.60	[0.24, 1.47]
7–9 years	1.60	[0.29, 8.79]	1.48	[0.29, 7.56]	0.46	[0.12, 1.78]	0.53	[0.14, 1.99]
10–11 years	2.37	[0.29, 19.13]	2.69	[0.36, 19.82]	0.64	[0.18, 2.29]	0.59	[0.17, 2.09]
≥ 12 years	1.72	[0.29, 10.19]	1.62	[0.28, 9.28]	0.57	[0.17, 1.90]	0.62	[0.18, 2.11]
Trade certification	0.37	[0.02, 6.36]	0.40	[0.02, 6.38]	0.24	[0.04, 1.29]	0.23	[0.04, 1.33]
University	0.87	[0.11, 7.00]	0.69	[0.09, 4.97]	1.02	[0.27, 3.89]	1.40	[0.38, 5.24]
Previously employed	0.57	[0.17, 1.89]	0.62	[0.18, 2.14]	0.79	[0.38, 1.64]	0.70	[0.33, 1.51]
Reading and writing	0.49**	[0.29, 0.83]	0.54*	[0.33, 0.89]	1.04	[0.73, 1.49]	0.98	[0.69, 1.40]
Religion								
Christian	1.06	[0.12, 9.04]	1.23	[0.17, 8.88]	1.99	[0.40, 9.78]	1.78	[0.39, 8.20]
Muslim	0.57	[0.10, 3.43]	0.84	[0.16, 4.39]	1.67	[0.37, 7.54]	1.25	[0.34, 4.65]
Years in Australia	0.39	[0.07, 2.01]	0.32	[0.06, 1.68]	3.11*	[1.19, 8.10]	3.56*	[1.24, 10.21]
Variance (Iitercept)	2.72*	[1.07, 6.86]	2.64*	[1.09, 6.40]	0.67	[0.19, 2.41]	0.81	[0.30, 2.19]
AIC	504.54		504.29		820.79		804.70	
BCC	664.23		673.96		979.87		973.73	
Log-likelihood	-220.27		-218.15		-378.39		-368.35	
Weighted *N*	289		289		287		287	
Observations (*n*)	1,086		1,086		1,066		1,066	

Note: PTSD = posttraumatic stress disorder; OR = odds ratio; CI = confidence interval; AIC = Aikake information criterion; BIC = Bayesian information criterion; PTE = potentially traumatic event.

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

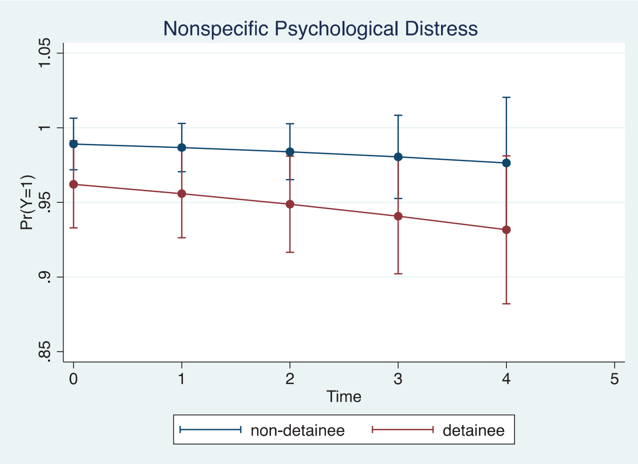

FIGURE 1 Estimated impact of immigration detention on nonspecific psychological distress.

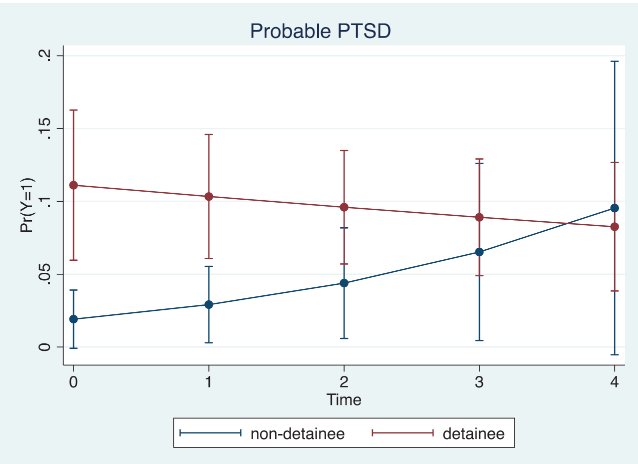

FIGURE 2 Estimated impact of immigration detention on probable posttraumatic stress disorder (PTSD).

time. In contrast, Figure 2 shows the effects of immigration detention on probable PTSD. Former detainees had higher rates of probable PTSD relative to nondetainees in the first 2 years of the study. Later, the two groups converged as the prevalence of probable PTSD declined among former detainees and increased among nondetainees. Despite visibly higher rates of probable PTSD among former detainees at the start, we could not detect the effect of immigration detention on these participants beyond the first 2 years of their resettlement.

DISCUSSION

To our knowledge, this study presents the first and most comprehensive attempt to estimate the ongoing impact of immigration detention on asylum seekers, using methods that allowed us to properly adjust for other factors that might have affected their chances of detention and their mental health. It is also the first study to investigate the likely effects of immigration detention on the mental health of a national sample of former asylum seekers throughout the first 5 years of resettlement. To do this, we explored the average effect of detention on nonspecific psychological distress and probable PTSD among formerly detained asylum seekers in longitudinal analyses using propensity score methods.

The results indicate that immigration detention had little observable impact on the prevalence of nonspecific psychological distress, in part because almost all asylum seekers were highly distressed in the early stages of settlement. These patterns changed little for formerly detained or nondetained asylum seekers in the years that followed; hence, we could not infer that detention increased the prevalence of nonspecific psychological distress among former detainees at any stage following their resettlement. Yet, immigration detention likely had a large, positive effect on probable PTSD. We conservatively estimate that detention more than doubled the odds of having probable PTSD and likely increased the odds of developing probable PTSD more than 7 times. These estimates are extraordinary considering the reported prevalence of PTSD among resettled refugees in other settings (Fazel et al., 2005; Henkelmann et al., 2020). However, these effects did not seem to endure. Probable PTSD fell among detainees in the years following their release, whereas it increased among comparable asylum seekers. As a result, we could not detect the average effect of detention on former detainees beyond the first few years of their resettlement.

These results suggest the higher rates of probable PTSD among former detainees we observed at the beginning of their resettlement likely reflected the impact of immigration detention. First, we adjusted for preexisting differences between former detainees and comparable asylum seekers by weighting the latter by the inverse probability of detention and controlling for residual differences between them in regression analysis. Second, our analyses indicated significant reductions in probable PTSD among former detainees within years of their release, as might be expected if detention had caused their distress to increase (Keller et al., 2003).

There are some study limitations to discuss. First, the sample was limited to asylum seekers who eventually received asylum. Although most refugees held in immigration detention before the end of 2013 were eventually granted asylum (Houston, 2002), we cannot comment on the impact of immigration detention on individuals whose asylum claims were rejected. This is an important limitation given that asylum seekers who were denied visas might have experienced more prolonged mental distress due to their experiences of detention than those who were allowed to remain in Australia. We also could not assess the mental health effects of detention in countries other than Australia. This is also a significant limitation given the reintroduction of offshore detention and processing in mid-2013, after which all UMAs were deported automatically to neighboring countries and held in detention facilities offshore (Karlsen & Phillips, 2014).

Second, all respondents were subject to relatively short-lived episodes of immigration detention in Australia: Most spent less than 5 months in immigration detention centers even though the average length of detention in Australia has sometimes exceeded 2 years. Longer spells may coincide with more severe distress as might delays in the resolution of asylum claims (Steel et al., 2004, 2006), meaning the impact of detention may have been even more pronounced in previous years. The limited variation in time spent in immigration detention in the sample also means that we could not evaluate the impact of differences in its duration. Yet, prior studies have found longer episodes of detention to be associated with more severe mental health problems (Robjant et al., 2009; Von Werthern et al., 2018).

Third, the survey assessed mental distress after respondents had been released from detention, which prevented us from investigating changes in distress before and after detention. Furthermore, our longitudinal analyses could only follow respondents for a maximum of 5 years. As distress may change over time, we cannot comment on its longer-term development among either group of asylum seekers. That said, our study goes beyond others in trying to exclude rival explanations for the influence of detention on mental health by controlling for preexisting differences between detainees and nondetained asylum seekers. It also followed respondents for longer than any other similar study (Filges et al., 2018; Robjant et al., 2009; Verhülsdonk et al., 2021; Von Werthern et al., 2018).

Fourth, our study relied on self-reported measures of mental health, which could overestimate the prevalence of nonspecific psychological distress and probable PTSD. Clinical measures may provide smaller estimates relative to self-report instruments, although the latter are widely used, particularly in the study of nonspecific psychological distress and probable PTSD (Haeffel & Howard, 2010; Hansen et al., 2010; Kessler et al., 2003, 2010; Kleijn et al., 2001). The limitations should be considered relative to the opportunities these measures provide, including the chance to evaluate the impact of immigration detention longitudinally among a national sample of former detainees. Future studies may try to replicate these findings using alternative measures, including those based on clinical assessments; nonetheless, waiting for other studies to collect different measures should not prevent efforts to answer critical research questions with the best data available. Finally, we did not evaluate the impact of detention on other outcomes, such as anxiety or depression.

Despite these limitations, our research has important implications for refugee settlement and integration. Refugees face significant challenges in finding stable employment, which PTSD may exacerbate (Bakker et al., 2017; Connor, 2010; Hansen & Lofstrom, 2008; McCarren et al., 1995; Savoca & Rosenheck, 2000). PTSD adversely impacts physical health as well, resulting in more cardiorespiratory and gastrointestinal health problems, an elevated severity and incidence of pain, and lower health-related quality of life (Pacella et al, 2013; Zatzick et al., 1997). In addition, the families of individuals with PTSD can also be affected, which can contribute to relationship conflict among couples and social and emotional problems among their children (Bryant et al., 2018; Forrest et al., 2018; Galovski & Lyons, 2004). Given that most formerly detained asylum seekers eventually settle in Australia (Houston, 2012), even the short-term impact of detention on probable PTSD could impede their successful settlement and have long-term consequences in their lives. Even if most detainees recover from the distress of detention, its consequences may endure if the distress occurs during critical periods, such as when asylees first enter the labor market, enroll in education, or need to care for young children, or if it contributes to ongoing and potentially serious physical health problems.

This research also contributes to a broader research agenda documenting the unintended consequences of immigration enforcement. Some studies have reported that increased border security encourages people to travel by more dangerous means, often relying on criminal organizations to enter illegally (Guerette & Clarke, 2005; Massey et al., 2016; Sapkota et al., 2006; Singer & Massey, 2012). Others have found that the threat of arrest and detention can adversely affect birth outcomes and the mental health of migrants and their children (Novak et al., 2017; Santos et al., 2018; Wang & Kaushal, 2019). In the same way, elevated levels of probable PTSD among former detainees should also be included among the unintended consequences of immigration detention.

OPEN PRACTICES STATEMENT

Access to the deidentified data for approved researchers is available from the Australian Department of Social Services. For more information, visit https://www.dss.gov.au/national-centre-for-longitudinal-data-ncld/access-to-dss-longitudinal-datasets

AUTHOR NOTE

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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