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RESEARCH ARTICLE

The impact of post-migration stressors on refugees' emotional distress and health: A longitudinal analysis

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Abstract

Refugees often experience poor physical and mental health outcomes following re-settlement. These outcomes have been linked to the conditions that are experienced by refugees in the post-migration context, but little is known about the mechanisms by which these conditions influence health. We therefore conducted secondary analyses of the Survey of New Refugees, a large longitudinal study commissioned by the UK Home Office with data collected at four time points spanning 21 months. Refugees' experience of emotional distress such as feeling stressed, worried, and depressed fully mediated the relationship between post-migration stressors and longitudinal general health. There was no evidence that perceived social support influenced this relationship. These findings suggest that emotional distress contributes to poor health outcomes among refugees and thus that interventions might target emotional distress.

KEYWORDS

emotional distress, health, post-migration stressor, refugee, social support, survey of new refugees

1 | INTRODUCTION

Refugees¹ apply for re-settlement in a new country after fleeing life-threatening situations in their country of origin, such as war, genocide, and persecution. Evidence indicates that refugees fare significantly worse after re-settlement than the general population, showing higher rates of psychological disorders and mental health problems (Li, Liddell, & Nickerson, 2016), worse general health (Cebulla, Daniel, Devine, & Tipping, 2010), and lower levels of life satisfaction (Noh et al., 2018). Historically, psychologists have sought to explain these problems by focusing on refugees' experiences of pre-migration trauma (Chantler, 2012). More recently, however, psychologists have started to consider the impact of the post-migration context (see Li et al., 2016). For refugees in the UK, for example, the post-migration

experience is typically characterised by extreme poverty, uncertainty around basic needs such as housing and employment, social and cultural isolation, and exclusion on the basis of immigration status, language ability, or race (Alemi et al., 2017; Allsopp, Sigona, & Phillimore, 2014; Bloch, 2008; Bloch & Schuster, 2005). Refugees' experience of such economic and social stressors in the post-migration context is now recognised as an important predictor of their health after re-settlement (Hynie, 2017; Li et al., 2016). However, little is known about the mechanisms by which these stressors impact on health, particularly over time. Understanding these mechanisms has the potential to inform theoretical frameworks outlining the determinants of minority groups' health and interventions designed to improve adjustment and health among refugees. The present study examines the longer-term impact of stressors on refugees' general health, exploring two psychological mechanisms—emotional distress and social support—that potentially underlie this relationship.

¹While recognising important distinctions between subcategories of displaced persons, for simplicity the article uses the general term "refugees" throughout.

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2 | ECONOMIC AND SOCIAL STRESSORS IN THE POST-MIGRATION CONTEXT

The nature of forced migration typically does not allow refugees to plan for departure (Crawley, 2010). Refugees may have to leave behind sources of income (e.g., businesses, properties, savings) as well as their possessions, including evidence of professional qualifications (Hynie, 2017), without which they may be unable to continue their professional career in the resettlement country. On arrival in the UK, refugees' financial disadvantage is compounded by three factors: (a) policies that deny them the right to work while their refugee status is under review (Allsopp et al., 2014), (b) inadequate state support to provide a foundation from which to develop economic self-sufficiency and social integration (Phillimore & Goodson, 2006), and (c) dispersal to deprived areas that offer limited opportunities for economic and social advancement (Cheung & Phillimore, 2014). In addition to these economic challenges, refugees also face considerable social stressors in the communities into which they migrate, including social isolation due to language and cultural barriers, and stigma due to their (often visible) minority group status. Perhaps as a consequence, discrimination (Alemi et al., 2017) and victimization (Cheung & Phillimore, 2013) are commonly reported.

3 | THE INFLUENCE OF POST-MIGRATION STRESSORS ON HEALTH

Empirical evidence has started to document the impact of economic and social stressors in the resettlement environment on refugees' mental health outcomes (for a review, see Li et al., 2016). For example, psychopathology among refugees has been linked to their experience of post-migration unemployment and underemployment (Kim, 2016), housing (in)security (Bogic et al., 2012), lack of safety (Ager & Strang, 2008), and perceived discrimination (Alemi et al., 2017). However, relatively little is known about how or why post-migration stressors affect longer-term health outcomes among refugees. This is because of three gaps in the existing evidence base. First, the outcome variable of interest has tended to be mental illness, rather than a measure of general health that includes physical, mental, and social well-being. Refugees in the UK report lower levels of general health than the general population (Cebulla et al., 2010), but the extent to which this is due to their experience of post-migration stressors is unknown. Second, empirical studies typically employ cross-sectional designs and have only documented the short-term impact of post-migration stressors, rather than their longer-term implications for health. Third, research to date has tended to focus on identifying specific factors that are associated with mental health (e.g., poor housing, Porter & Haslam, 2005; Bogic et al., 2012), rather than the psychological processes and mechanisms underlying such associations (Li et al., 2016).

The present research seeks to identify how or why post-migration stressors affect health outcomes among refugees by investigating the extent to which economic and social stressors experienced

following migration have a lasting impact on refugees' general health. To identify the processes that might explain this relationship, we draw on the Social Determinants of Health framework (Marmot, 2005), which posits that disparities in physical and mental health between groups are determined (in part) by the unequal distribution of material and social resources such as education, income, employment, and housing. The framework proposes two pathways through which the broader economic, social, and political context can shape individuals' health: Exposure to adverse conditions may undermine health directly by causing physical and psychological harm. Alternatively (or in addition), individuals' reactions to these conditions and the resources that they have to deal with them may have an indirect effect on outcomes. This second, psychosocial pathway thus represents a "gateway" through which material conditions can affect health (Health England, 2017). The present research focuses on two factors in particular that are likely to shape refugees' experience of post-migration stressors: Emotional distress and social support.²

4 | HOW MIGHT EMOTIONAL DISTRESS AND SOCIAL SUPPORT EXPLAIN THE RELATIONSHIP BETWEEN POST-MIGRATION STRESSORS AND HEALTH?

One way that economic and social stressors might affect refugees' health is through emotional distress, which reflects individuals' experiences of stress, anxiety, and depression over time (Marmot, 2005). Such distress can have negative physiological effects and thus can directly contribute to health problems such as coronary heart disease, hypertension, autoimmune disease, and respiratory disease (see Schneiderman, Ironson, & Siegel, 2005). Furthermore, emotional distress can promote unhealthy behaviours such as overeating and smoking (Park & Iacocca, 2014) that themselves undermine health. Indirect evidence for the role of emotional distress in shaping refugees' health comes from work showing that stress predicts mental health outcomes among refugees (Baranik, Hurst, & Eby, 2018; Noh et al., 2018; Lindencrona, Ekblad, & Hauff, 2008). However, to our knowledge no study has examined the role of broader emotional distress (i.e., anxiety and depression in addition to stress). The present research therefore investigates the extent to which emotional distress mediates the effect of post-migration stressors on the longitudinal general health of refugees (Research Question 1).

A second way that economic and social stressors might affect refugees' health is via (a lack of) social support (Kaplan, 2006), which refers to the actual or perceived resources that can be accessed from a person's social network, such as friends and family. Social support has been shown to affect health in one of two ways. First, support can *mediate* or explain the relationship between the experience of stressors and health. Specifically, research indicates that exposure

²The Survey of New Refugees does not include variables that correspond to any other psychosocial pathways specified in the Social Determinants of Health framework.

to extreme stressors such as resettlement (Dumper, 2008) or natural disasters (Banks & Weems, 2014) can weaken support networks and thus result in lower levels of perceived (and actual) social support from family and friends. In addition, the anticipated stigma of appearing to be weak and vulnerable can discourage individuals from seeking help, even after experiences of trauma and danger (Blais, Renshaw, & Jakupcak, 2014). Taken together, this work suggests that (a lack of) social support might explain the negative impact of stressors on health (Research Question 2).

An alternative conceptualization—the stress buffering hypothesis—proposes that social support can have a positive impact on health because support improves individuals' ability to cope with adverse conditions (Uphoff, Pickett, Cabieses, Small, & Wright, 2013). As such, support might moderate the extent to which the experience of stressors elicits emotional distress or negative health. There is some evidence for the stress-buffering hypothesis (see Uphoff et al., 2013), but it has not been directly tested in the context of refugees' experiences of resettlement. The present research therefore investigates the extent to which social support moderates the effect of (a) post-migration stressors on emotional distress, (b) the maintenance of emotional distress over time, and (c) the effect of emotional distress on the longitudinal health of refugees (Research Question 3).

4.1 | The present study

To investigate the three research questions described above, we conducted secondary analyses of the Survey of New Refugees³ (SNR). The SNR is the UK's only source of quantitative longitudinal data on refugee integration (EASO, 2018). The study was commissioned by the UK Home Office in 2005 with data collected at four time points spanning 21 months. The surveys included measures of post-migration stressors, social support, emotional distress (including anxiety, depression, and stress), and general health. We used the dataset to explore (a) whether emotional distress and social support mediate the relationship between post-migration stressors and refugee health over time, and (b) whether social support moderates the relationship between post-migration stressors, emotional distress, and general health over time.

5 | METHOD

5.1 | Participants and procedure

The UK Home Office distributed the SNR to all refugees who were granted a positive decision of asylum, humanitarian protection, or discretionary leave to remain in the UK between 1 December 2005 and 25 March 2007. Respondents over the age of 18 years with a verifiable address were identified from the UK Border Agency

Caseworker Information Database. Baseline surveys were posted within 1 week of the grant of refugee status, with follow-up surveys 8 months (Time 1), 15 months (Time 2) and 21 months (Time 3) after the grant. The response rate at baseline was 70% (5,678 out of 8,254), with 869 refugees (11% of the original sample) completing all four surveys over a period of 21 months. The current study includes only those respondents that completed all four surveys. The data were weighted to adjust for non-response and attrition, ensuring the sample is representative of the population of refugees entering the UK during the study period (for details see Cebulla et al., 2010).⁴ The majority of the final sample was male ($n = 523$, 63%), aged between 25 and 34 years ($n = 361$, 47%), and from Africa (56%). A substantial proportion of the sample was from the Middle East (20%) and Asia (11%).

5.2 | Measures

The questionnaire was developed in English and translated into 10 languages commonly spoken by refugees. An interpreter was available on request (for details see Cebulla et al., 2010). A range of variables was assessed at each time point (see Cebulla et al., 2010), and those relevant to the present research are described below.

5.2.1 | Post-migration stressors (Time 1)

Respondents' experience with five specific stressors—unemployment, perceived underemployment, inadequate housing, homelessness, and victimization—was measured at baseline. *Unemployment* was assessed with the following question: "How many jobs have you had here, in the UK, in the past 6 months?" Participants put their responses into an open response text box; these were recoded into a binary score (1 = one or more jobs, 0 = no jobs in last 6 months). At Time 1, 350 (40%) of respondents had not had a job in the last 6 months. *Perceived underemployment* was measured with the following question: "Do you think that your current main job is appropriate for your skills and qualifications?" Respondents chose one of three response options: (a) job is at a lower level than skills and qualifications; (b) job matches skills and qualifications; or (c) job is at a higher level than skills and qualifications. These responses were recoded into a binary score (1 = job is at a lower level than skills and qualifications, 0 = job matches or is at a higher level than skills and qualifications). Of the 282 refugees who were employed at Time 1, 149 (53%) reported being underemployed. *Inadequate housing* was assessed by summing the number of the following problems that respondents indicated that they had with their housing: Too small, too dark, limited heating facilities, leaky roof, mould/damp, rot in windows/floor, too noisy, inadequately furnished, lack of facilities for disabled people. Respondents who reported having two or more of these

³Five published studies have analysed the Survey of New Refugees to examine the role of post-migration stressors in predicting employment and integration outcomes (Campbell, 2012; Cebulla et al., 2010; Cheung & Phillimore, 2014, 2017; Ruiz & Vargas-Silva, 2017). However, none of these studies examine the psychological processes that underlie these relationships over time.

⁴Analyses revealed no significant differences on the variables included in the baseline survey between the original full sample and the final sample (all $ps > 0.05$). Full results are available from the first author.

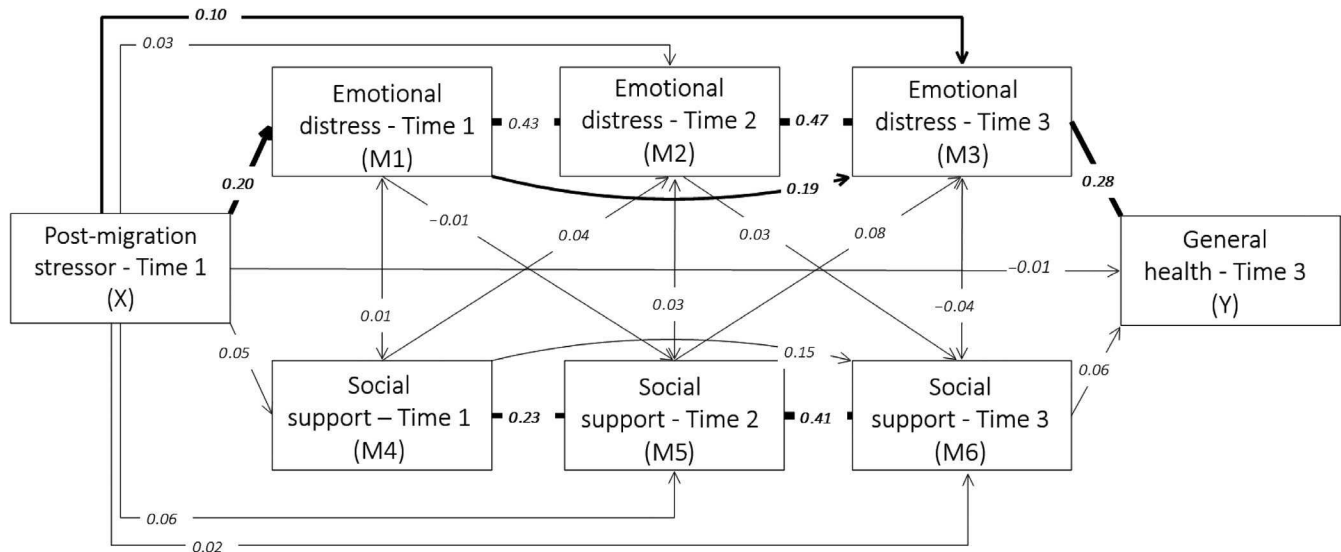


FIGURE 1 Path model assessing the effects of post-migration stressors (Time 1), emotional distress (Time 1, 2, 3), and social support (Time 1, 2, 3) on general health (Time 3). Standardised beta coefficients shown. Thin lines indicate paths that are not statistically significant at $p < 0.05$.

problems were coded as having inadequate housing (1), and those with one or no issues were coded as having adequate housing (0). According to this classification, 362 (42%) of respondents at Time 1 had inadequate housing. *Victimization* was measured with the following question: "Have you been the victim of a verbal or physical attack in the past 6 months?" (1 = yes, 0 = no). At Time 1, 142 (16%) of respondents in the sample had been a victim of an attack. Finally, *homelessness* was operationalised as having lived on the street or in temporary/unstable accommodation (homeless shelter or hostels) in the past 6 months. At Time 1, 213 (25%) of respondents met this criterion. Responses were coded into a binary variable (1 = homeless, 0 = not homeless).

Previous work with this dataset has shown that each of these stressors predicts general health (Cheung & Phillimore, 2013) and so we simplified our models by creating a *composite index of post-migration stressors*.⁵ Scores on the composite index indicate the number of stressors that respondents reported experiencing. The maximum score on the index was 4, because two of the five stressors (unemployment and perceived underemployment) are mutually exclusive.

5.2.2 | Social support (Time 1, Time 2, and Time 3)

All three surveys asked respondents whether they had received support from various organisations or people in the last 6 months. A list of sources was then provided, including friends and family. At Time 1, the response scale was categorical (1 = yes, 0 = no). At Times 2 and 3, the frequency of support was assessed using a four-point response scale ranging from "never" to "once a week". In order to measure support on

the same scale across the three time points, we recoded the responses from Times 2 and 3 into a categorical variable using the two response options provided at Time 1. Support from friends and relatives was combined into a composite variable representing social support that counted the number of sources of support available to respondents (0 = no support from friends or family, 1 = one source of support, either friends or family, 2 = two sources of support, both friends and family).

5.2.3 | Emotional distress (Time 1, Time 2, and Time 3)

At each time point, respondents were asked "During the past 4 weeks, how much have you been bothered by emotional problems (such as feeling worried, depressed, or stressed)?" Participants were asked to respond on a five-point scale (1 = not at all, 5 = extremely).

5.2.4 | General health (Time 3)

Respondents were asked to rate their "health in general" on a five-point scale (1 = very good, 5 = very bad). The question forms part of the general health dimension in the widely used 36-item Short Form Health Survey questionnaire (SF-36) (Ware & Gandek, 1998), which has been validated with refugee populations (Hinton, Sinclair, Chung, & Pollack, 2007).

6 | RESULTS

6.1 | Research Questions 1 and 2: do emotional distress and social support mediate the relationship between stressors and health?

A custom mediation model was designed using the PROCESS macro add-on for SPSS (Hayes, 2018), which specified the post-migration

⁵Analyses conducted separately with each stressor revealed the same general pattern of results shown with the composite index. Full results been uploaded to osf.io: <https://osf.io/g5nk2/>.

TABLE 1 Pathway coefficients for the relationships specified in Model 1 (serial mediation)

Relationship	Coeff	SE	t	p
Stressors (t1) predicting distress (t1)	0.19	0.05	3.98	0.001
Stressors (t1) predicting support (t1)	0.06	0.03	2.10	0.036
Distress (t1) predicting support (t1)	0.01	0.02	0.17	0.865
Stressors (t1) predicting distress (t2)	0.03	0.04	0.89	0.373
Distress (t1) predicting distress (t2)	0.45	0.04	13.12	0.000
Support (t1) predicting distress (t2)	-0.01	0.05	-0.15	0.88
Stressor (t1) predicting support (t2)	0.05	0.03	1.64	0.101
Distress (t1) predicting support (t2)	-0.02	0.03	-0.62	0.535
Support (t1) predicting support (t2)	0.22	0.04	5.86	0.000
Distress (t2) predicting support (t2)	0.03	0.03	1.21	0.224
Stressor (t1) predicting distress (t3)	0.08	0.04	2.20	0.028
Distress (t1) predicting distress (t3)	0.20	0.03	5.88	0.000
Support (t1) predicting distress (t3)	-0.09	0.05	-1.85	0.065
Distress (t2) predicting distress (t3)	0.47	0.03	14.05	0.000
Support (t2) predicting distress (t3)	0.09	0.05	1.86	0.063
Distress (t3) predicting support (t3)	0.03	0.03	0.974	0.330
Stressors (t1) predicting health (t3)	-0.02	0.03	-0.591	0.551
Distress (t1) predicting health (t3)	0.05	0.03	1.66	0.095
Support (t1) predicting health (t3)	0.03	0.04	0.64	0.520
Distress (t2) predicting health (t3)	-0.02	0.03	-0.63	0.526
Support (t2) predicting health (t3)	-0.03	0.04	-0.85	0.394
Distress (t3) predicting health (t3)	0.28	0.03	9.56	0.000
Support (t3) predicting health (t3)	0.05	0.04	1.30	0.19

stressors (measured at Time 1) as the exogenous predictor and general health (at Time 3) as the outcome. Serial mediation was specified across three time points via two parallel pathways reflecting emotional distress and social support. All direct and indirect effects were tested, but two pathways in particular addressed Research Question 1 (the indirect effects of stressors at Time 1 on health at Time 3 via distress at each time point) and Research Question 2 (the indirect effects of stressors at Time 1 on health at Time 3 via support at each time point). We controlled for the effect of general health at baseline, age, place of origin, and gender.⁶ The model was tested using ordinary least squares path analysis, with all indirect effects subjected to bootstrap analyses with 10,000 bootstrap samples and 95% confidence intervals. Figure 1 displays the coefficients for the focal direct effects relevant to the research questions and Table 1 presents the full statistics for all direct effects.

There was no evidence that exposure to stressors at Time 1 directly predicted health at Time 3. However, exposure to stressors at Time 1 did indirectly predict health at Time 3 via distress measured at each time point (see Figure 1). Thus, respondents who were exposed

to a greater number of stressors at Time 1 experienced greater distress at each time point, and distress at Times 2 and 3 was related to health at Time 3. The bootstrap confidence interval for this indirect effect (i.e., Time 1 Stressor → Time 1 Distress → Time 2 Distress → Time 3 Distress → Time 3 Health) based on 10,000 bootstrap samples did not contain zero (0.0051 to 0.0177), but the effect was small ($ab_1 = 0.011$). In other words, distress mediated the effect of stressors on health in support of Research Question 1. In contrast, there was no evidence that exposure to stressors at Time 1 indirectly influenced health at Time 3 via social support. Specifically, stressors at Time 1 did not predict support at any time point, and there was no relationship between any of the measures of support and health at Time 3 (see Figure 1 and Table 1). With respect to Research Question 2, then, social support did not mediate the effect of stressors on health. Finally, there was no evidence that the two mediators were related over time—level of support was not associated with distress at a later time point, and distress was not associated with support at a later time point (see Figure 1 and Table 1).

6.2 | Research Question 3: does social support moderate the relationships between post-migration stressors, emotional distress, and health?

A second custom model was designed to test whether social support at Time 1 or Time 2 moderated the effect of (a) post-migration stressors (at Time 1) on emotional distress at each time point, (b) the

⁶Previous analysis of the SNR found that three demographic variables (namely, age, gender, location of origin) predict employment and social capital (Cheung & Phillimore, 2014). Two other background variables that were measured in the SNR—socio-economic status and household size—were not included in our analyses as control variables because of their conceptual similarity to the post-migration stressors. Analyses conducted without controlling for demographic variables revealed no change in the pattern of effects. All effects that were significant with the demographic variables excluded were also significant in the models that included demographic variables.

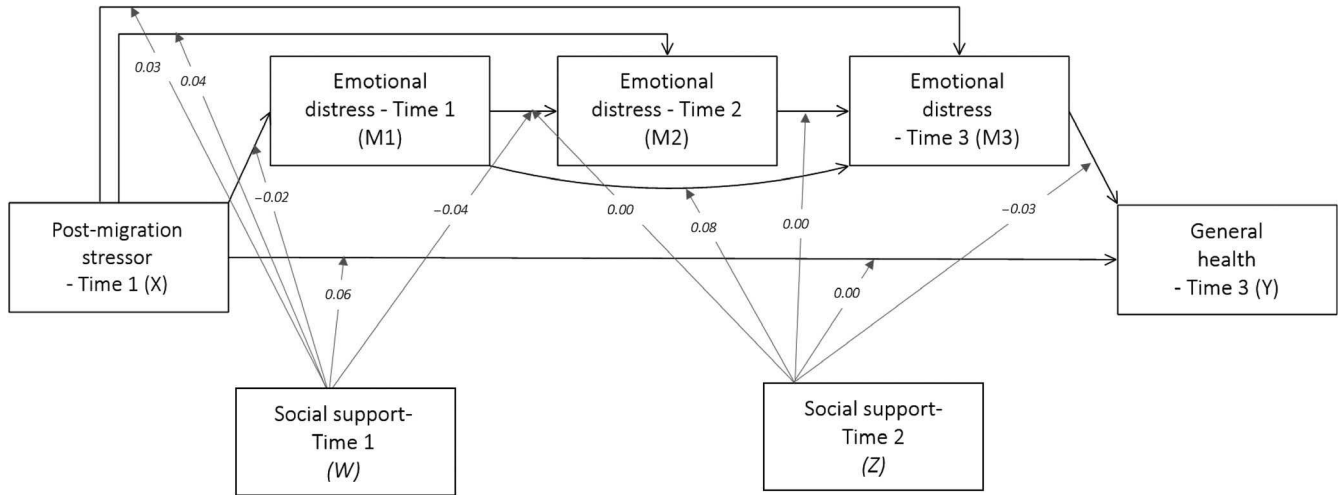


FIGURE 2 Path model assessing the conditional effects of social support on post-migration stressors (Time 1), emotional distress (Time 1, 2, 3), and general health (Time 3). Standardised beta coefficients shown. None of the conditional effects are statistically significant at $p < 0.05$

maintenance of emotional distress over time, and (c) post-migration stressors or emotional distress on general health (at Time 3). The control variables in Model 1 were again included here. This model was tested using ordinary least squares path analysis. Figure 2 shows the coefficients for the focal direct and interactive effects and Table 2 presents full statistics for all direct effects. There was no evidence that social support moderated any of the relationships in the model, including the relationship between stressors at Time 1 and distress at Time 1; the relationship between stressors at Time 1 and health at Time 3, or the relationship between distress at each time point.

7 | DISCUSSION

The present analysis is the first to demonstrate that the relationship between certain post-migration stressors and the longitudinal health of refugees is fully mediated by emotional distress. As such, the findings extend our understanding of refugees' experiences following migration by focusing on general health (rather than just mental health) as an outcome variable; employing a longitudinal design to examine the longitudinal impact of post-migration stressors on health; and providing evidence of the psychological process—emotional distress—that might underpin this relationship. Our focus on emotional distress also extends previous research showing that stress is an important psychosocial pathway through which economic and social disadvantage relates to the health of marginalised groups (see Schneiderman et al., 2005) and supports research showing that emotion *dysregulation* is linked to specific psychological disorders in refugees (Nickerson et al., 2015).

The importance of general emotional distress using the measures available in the SNR having been demonstrated, further research is now needed to investigate whether different forms of distress are elicited by different specific stressors (including additional post-migration stressors not measured in the SNR) that, in

TABLE 2 Pathway coefficients for the relationships specified by Model 2 (conditional effects)

Relationship	Coeff	SE	T	p
Support (t1) moderating				
Stressors (t1) × distress (t1)	-0.02	0.06	-0.42	0.674
Stressors (t1) × distress (t2)	0.04	0.06	0.66	0.507
Distress (t1) × distress (t2)	-0.04	0.04	-0.82	0.415
Stressors (t1) × distress (t3)	0.03	0.05	0.59	0.557
Stressors (t1) × health (t3)	0.06	0.042	1.48	0.140
Support (t2) moderating				
Distress (t1) × distress (t2)	0.08	0.04	1.99	0.047
Distress (t2) × distress (t3)	0.00	0.04	0.04	0.970
Distress (t1) × distress (t3)	0.08	0.04	1.90	0.058
Stressors (t1) × health (t3)	0.00	0.04	0.27	0.978
Distress (t1) × health (t3)	0.00	0.03	-0.27	0.788
Distress (t3) × health (t3)	-0.03	0.03	-0.89	0.376

turn, predict health. The SNR uses a single-item measure to assess the extent to which participants experience emotional distress. Such short measures are typically used in order to minimise the length of a questionnaire, to reduce confusion and/or boredom and increase the validity of responses. Research has shown that single-item measures can be no less valid and reliable as longer measures (for a review and meta-analysis, see Postmes, Haslam, & Jans, 2013) and we consider the SNR's operationalisation of emotional distress to be a useful first step, though future surveys of refugees should consider using multiple-item measures of this construct.

Our analysis did not find evidence that perceived social support from friends and family mediates or moderates the relationship between post-migration stressors, emotional distress, and longitudinal health in refugees. This stands in contrast to previous research in the general population, which has shown a direct relationship

between social support and health, as well as a stress-buffering effect (Uphoff et al., 2013). There are two possible explanations for this inconsistency. First, the assessment of social support in the SNR simply focused on whether support was provided or not. It is possible that additional aspects of support may be more important, such as frequency or quality of support. Second, while some studies support the link between social support and mental health among refugees (Schweitzer, Melville, Steel, & Lacherez, 2006), others do not (Alemi et al., 2017). One way to reconcile these different findings might be to consider the social and policy contexts that could moderate the way in which social support develops and operates. For example, refugees' ability to develop relationships that offer social support may be limited by factors such as an absence of co-ethnic groups in their local community, policies of dispersal that separate refugees from developed friendship networks, and general levels of social cohesion in their local community. Future work should investigate these issues further.

The SNR is the only national survey of refugees' experience in the UK that has been conducted in the past 15 years. The sampling frame included every main refugee applicant granted protection in the UK between December 2005 and March 2007; respondents were then followed for 21 months. As such, this project sought to recruit a heterogeneous sample of refugees representing various countries of origin as well as a range of demographic characteristics (e.g., gender, religion, age). Although the data is now over a decade old, it seems likely that the findings are still applicable to more recent refugee populations in the UK and other European countries. This is because current legislation and policies regarding refugees in the UK and most other European countries are broadly similar to those of the UK at the time of the SNR (Hatton, 2015). Thus, the questions in the SNR address the broad structural factors (i.e., different types of stressors), social processes (i.e., support from friends and family), and psychological factors (i.e., emotional distress) that are likely to be experienced by contemporary refugees. Of course, technological advances and the development of social media now offer additional sources of support and information, which can affect refugees' experiences (Emmer, Richter, & Kunst, 2016). Thus, additional research is needed to document the particular nuances of contemporary refugees' experiences in the UK and other European countries; we are confident that the broad processes and experiences that we identify within SNR are likely to be applicable to more recent refugee populations in the UK and other European countries.

The SNR only sampled refugees. Thus, it is not possible to use the data to compare directly the experiences of refugees to other marginalised groups (e.g., gender, racial, or sexual minorities). It is also difficult to speculate on the extent to which the results from this study are applicable to other immigrant groups. A survey on the living conditions of non-Western immigrants in Norway (Henriksen & Blom, 2016) found that, like the refugees in our sample, non-Western immigrants in Norway experience structural obstacles—including low income, insecure housing and

violence—and are less likely than the general population to consider their health to be good or very good, though Henriksen and Blom do not identify psychological mechanisms that might underlie this relationship. Pre-migration stressors and the experience of being forced to migrate are—by definition—more pronounced in refugees than in other migrant groups, which probably have an influence on experiencing post-migration stressors and their relationship to emotional distress in the host country. Thus, additional research is needed to demonstrate the ways in which the experiences of refugees may be similar to, or different from, those of other immigrant groups.

7.1 | Policy implications

Despite gaining access to mainstream benefits and employment after a grant of protection has been obtained, the present findings indicate that refugees continue to experience material deprivation and/or social exclusion at least up to 8 months after this point (Time 1). Furthermore, this experience is associated with emotional distress that predicts worse health; a relationship that does not seem to be ameliorated by social support. As noted above, these findings are preliminary and require further empirical work to specify further the underlying processes involved. However, the findings do suggest that refugees cannot necessarily rely on social support to help cope with post-migration stressors or emotional distress. Rather, it is likely that more proactive interventions are needed to address the issues around emotional distress and poor health outcomes. One such approach might focus on improving service provision to offer more resources to refugees; examples include extending the 28-day "moving on" period for new refugees to leave asylum accommodation, fast-tracking refugees' access to mainstream employment and welfare services, as well as introducing a national refugee integration strategy. Another approach might involve policy-makers and third sector organisations offering psychological interventions that build refugees' resilience to stress and emotional distress in an effort to mitigate the association between poor resettlement conditions and health. For example, exploratory research has identified emotion regulation strategies that refugees use to cope with emotional distress—including avoidance, reappraisal, resignation, and distraction through exercise or religious involvement (Sulaiman-Hill & Thompson, 2012). Further work is, however, needed to identify which of these strategies would be most effective in reducing distress in order to develop and evaluate interventions that can promote resilience (for a review see Chmitorz et al., 2018). More broadly, research could also evaluate the extent to which interventions are successful in improving refugees' economic, social, and health outcomes.

CONFLICT OF INTEREST

The authors thank the Social Change Lab Group at the University of Sheffield for providing feedback on the data analytic strategy and interpretation. The authors have no conflict of interest to declare.

ETHICAL STATEMENT

This research was conducted in compliance with the ethical standards of the American Psychological Association. The project was approved by the Department of Psychology Ethics Committee at the University of Sheffield (UK).

TRANSPARENCY STATEMENT

The SPSS syntax required to generate the analysis is publically available on [osf.io](https://osf.io/g5nk2/): <https://osf.io/g5nk2/>. Materials for the Survey of New Refugees are publicly available on this website: <https://discover.ukdataservice.ac.uk/catalogue/?sn=6556>. The dataset can be requested from UK Data Service by registering a new use of the data and entering a short summary describing the intended use of the data.

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