Psychological distress in refugees: The role of traumatic events, resilience, social support, and support by religious faith

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Abstract

Many refugees have been exposed to potentially traumatic events and report elevated levels of psychological distress. However, refugees vary greatly in the severity of mental health problems. Intra- and interpersonal factors help some refugees to cope effectively. To shed light on these factors, we scrutinized how potentially traumatic events, resilience, social support, and support by religious faith are associated with psychological distress in refugees in Germany and German residents. We assessed data from 205 German residents and 205 refugees (total $N = 410$). Questionnaires assessing psychological distress, potentially traumatic events, resilience, social support, and perceived support by religious faith were disseminated online in Arabic and German. Refugees reported higher levels of psychological distress, more exposure to potentially traumatic events, less social support, less resilience, and more perceived support from their faith than German residents. Using a pathway model, lower social support and resilience partially accounted for group differences of higher psychological distress in refugees. This study points to the importance of social support and individual resilience in explaining mental health discrepancies between refugees and residents. This, in turn, may inform future intervention studies to reduce elevated levels of psychological distress experienced by refugees.

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1. Introduction

Refugee migration movements have recently reached extremely high levels (UNHCR, 2020). Among refugees, there is a high prevalence of mental health disorders, in particular depression, post-traumatic stress disorder (PTSD), anxiety disorders, and somatic distress (Bogic et al., 2015; Henkelmann et al., 2020; Turrini et al., 2017). The prevalence of mental health problems is higher than in the residential population of receiving countries (Fazel et al., 2005; Richter et al., 2015). Compared to residential populations, refugee populations may have different explanation models for and symptom constellations of mental health problems (Hassan et al., 2016; Lewis-Fernández & Kirmayer, 2019; Schlechter, Wilkinson et al., 2021). Refugees further report barriers toward the usage of mental health services (Satinsky et al., 2019; Schlechter, Kamp et al., 2021). Yet, there is still lack of knowledge about significant factors that may explain the high prevalence of mental health complaints in refugee populations.

Forced migration, exposure to potentially traumatizing events, and resettlement in unfamiliar environments are key explanations for mental health problems among refugees (Al Akash & Boswall, 2014; Morina, & Nickerson, 2018). Traumatic experiences in refugee populations are associated with subsequent mental health disorders diagnosed in receiving countries such as the United Kingdom (Bogic et al., 2012), The Netherlands (Gerritsen et al., 2006), and Sweden (Lindencrona et al., 2008). Such experiences can capture a wide range of human rights violations (Giacco et al., 2018; Shrestha et al., 2003). The effect of traumatic events is often cumulative - the greater the number of traumatic experiences the stronger the association with mental health problems (Bogic et al., 2015) and their severity (Li, Liddell, & Nickerson, 2016; Steel et al., 2009).

Despite exposure to potentially traumatic events, not all refugees show mental health problems, thus displaying mental health resilience (Cicchetti, 2010; Masten, 2011).

Resilience has been defined as a dynamic process of adaptation, which results in good outcomes despite having experienced adversity (Bonanno et al., 2011; Rutter, 2013). In other definitions, resilience is conceptualized as an inherent trait or the outcome of overcoming adversity (see Fritz et al., 2018, for a review). Irrespective of the definition, higher levels of resilience are, in general, associated with fewer mental health problems, which has so far predominantly been tested within Western populations (Fergus & Zimmerman, 2005; Fritz et al., 2018). To date, little is known about mental health resilience in refugee populations, especially in those involved in the migration movements that commenced in 2015 from the Middle East to European countries.

Coping with mental health difficulties may differ from culture to culture. Knowledge about these coping mechanisms may be central for practitioners' readiness to work with refugees (Schlechter, Hellmann et al., 2021). For instance, in many Middle Eastern countries, suffering is conceptualized as an inherent part of life. Refugees from Syria, for example, may seek help from family members or friends, rather than from professional services, more than individuals in Western cultures. In addition, they may use passive coping strategies such as withdrawal, rather than actively engaging with their mental health issues (e.g., Hassan et al., 2016). Other coping mechanisms include being in employment, continuing with religious practices, and devotion to their families (Khawaja et al., 2008).

Therefore, it is critical to look at specific potential resilience enhancing factors that may influence mental health in refugees. One important factor is loss of social support, which is related to mental health problems among refugees (Bogic et al., 2015; Chen et al., 2017). Many refugees are uprooted from their communities, separated from loved ones, and often travel alone or at least not with their immediate families. Therefore, their usual social support network is fragmented, leaving them at higher risk of mental health problems (Bogic et al., 2015; Chen et al., 2017). In the receiving countries, a lack of social support, social isolation,

and loneliness are associated with higher rates of refugees' mental health problems (Bogic et al., 2015; Chen et al., 2017; Giacco et al., 2018; Hynie, 2018). Factors that may contribute to this absence of social support include poor language skills and hence difficulties communicating in the receiving country, facing prejudice and discrimination in the receiving country, and poverty (Chen et al., 2017; Giacco et al., 2018; Hynie, 2018). In a longitudinal study with Middle Eastern refugees exposed to trauma, mental health problems were less likely to persist over time when refugees perceived adequate social support (Montgomery et al., 2010). Given that refugees are often isolated from their families and that seeking help from family is an important coping mechanism, appropriate social support appears to be critical in protecting refugees from psychological distress.

Another important factor for refugees from the Middle East may be their religious faith, which has been identified as a protective factor in different populations (Elsass & Phuntsok, 2009; Leaman & Gee, 2012; Reed et al., 2012). A review of qualitative studies found that religiousness repeatedly emerged as a source of psychological resilience (Sleijpen et al., 2016). In a qualitative study with 27 mothers in Syrian refugee camps in Turkey and Syria, the participants frequently described a positive influence of Islam on their mental health. In particular, their faith helped them accept the situation, removed control and responsibility from them, and their trust in Allah gave them hope (El-Khani et al., 2017). Relatedly, praying has been described as a coping strategy by refugees (Ai et al., 2005; Al Akash & Boswall, 2014; Schweitzer et al., 2007), and faith as a way of helping to form relationships in receiving countries (Schweitzer et al., 2007). Ultimately, studies highlight the profound effect religion can have on the mental health of refugees (Ai et al., 2005; Koenig & Shohaib, 2014; Schweitzer et al., 2007). Furthermore, in a study with in Somali refugees in Finland, the beneficial effects of faith influenced the relationship between trauma and mental

health in a positive direction (Mölsä et al., 2017). Religious faith could thus be a protective factor from psychological distress especially for the refugee population.

1.1. The Present Study

We aimed to investigate factors that contribute to the experience of psychological distress in refugees residing in a Western receiving country, compared to the residential population. The present study took place in Germany that took in more than one million refugees since 2015 (UNHCR, 2020). Specifically, we intended to examine how exposure to potentially traumatic events relates to psychological distress in refugees, with a particular focus on factors that may protect from negative effects of traumatic events or mental health problems. To this end, we examined the broad construct of psychological resilience as well as the specific resilience enhancing factors *social support* and *support by religious faith* in both refugees and residents. We expected that refugees would report higher rates of exposure to potentially traumatic events than residents, lower resilience and social support, but higher perceived support by religious faith. We used a pathway model to explore which of these variables may contribute towards potential group differences in psychological distress between refugees and residents.

2. Methods

2.1. Participants and procedure

In total, $N = 410$ individuals participated, 205 refugees and 205 German residents (see Table 1 for demographics). Participant compensation was 5 Euro. There were no missing data and no data exclusions. This study was part of a broader research project on the mental health of refugees in Germany and German residents that included an intervention regarding help-seeking attitudes. Here, we report all measures and results relevant for the more circumscribed research question of coping with psychological distress. Based on *a priori* considerations, we included the measures outlined below. In this regard, we carefully

evaluated the constructs in light of their relevance for mental health resilience in refugees and derived our hypotheses from the literature. The study protocol was approved by the ethics committee of the psychology department of the University of [BLINDED]. All participants provided informed consent to anonymized data usage for scientific purposes, which also allowed us to conduct the current data analyses. The German versions of the questionnaires were translated into Modern Standard Arabic by a professional translation office and then back-translated into German. This procedure resulted in minor changes of the questionnaires. Links to the online survey were disseminated in German and Arabic via email lists and social media channels.

2.2. Measures

Psychological distress. We assessed *psychological distress*, a subscale of the Questionnaire on Psychotherapy Motivation (Fragebogen zur Psychotherapiemotivation - FPTM-23; Schulz, Lang, Nübling, & Koch, 2003), with four items on 4-point scales, ranging from 1 (strongly disagree) to 4 (strongly agree).

Traumatic events. For an approximation of exposure to trauma we used a list of nine potentially traumatic events with a dichotomous yes/no response format. The events were experiences of war, being physically threatened, being victim of rape, being a victim of abuse in childhood, natural disaster, serious accident, or another form of horrendous event.

Resilience scale. The resilience scale 11 (RS-11; Kocalevent et al., 2015) is an unidimensional measure. Eleven items assess the psychological construct of resilience on a 7-point Likert-type scale from 1 (strongly disagree) to 7 (strongly agree). In this scale, resilience is defined as a protective personality factor associated with healthy development and psychosocial stress-resistance.

Social support scale. We used a subscale of the *Stress and Coping Inventory (SCI)* (Satow, 2012) to assess social support. It comprises four items that ask for the degree of

emotional and practical resources provided by social contacts. Participants indicated agreement with the statements on a 4-Point Likert-type scale ranging from 1 (do not agree) to 4 (fully agree).

Support by religious faith. The support by religious faith scale is also a subscale of the SCI (Satow, 2012). In this 4-item subscale, participants indicated how much support they find in their religious faith when they are stressed, on a 4-point scale ranging from 1 (do not agree) to 4 (fully agree).

2.3. Analytical strategy

Analyses were conducted in R (R Core Team, 2019). First, we compared mean levels of all variables for refugees and residents. Here, we controlled for gender because it was unequally distributed across groups (see below). Second, we tested effects of the predictors on psychological distress using a pathway model that incorporated all predictors (see Figure 1). That is, we had a single step multiple mediator model. For the indirect effects (i.e. mediation) in our model, we generated nonparametric confidence intervals (CIs) using a bootstrap resampling procedure (Hayes, 2015). We generated 10,000 bootstrap resamples to estimate CIs for the assessment of the indirect effect using the *lavaan* package in R (Rosseel, 2012).

3. Results

[Table 1 here]

Gender was distributed unequally across groups, $\chi^2(1, N = 410) = 117.01$, $p < .001$ (see Table1). Most German residents were female, whereas most refugees were male. Age differed with refugees being older, $t(403.31) = -5.83$, $p < .001$. Most refugees came from Syria and named war, fear of being recruited for military services and political persecution as predominant reasons for leaving their countries.

[Table 2 here]

Internal consistencies for all scales apart from the traumatic events scale were good (Table 2). Refugees displayed more psychological distress than residents (see Table 2). As expected, refugees experienced more exposure to potentially traumatic events compared to residents, and reported less social support and resilience, but more support by religious faith relative to residents.

Then, we tested a pathway model with group as the predictor, psychological distress as criterion, and trauma, social support, resilience and support by faith as potential mediators while controlling for gender (see Figure 1). The total effect of the model was significant C' = 0.60, 95 % CI = [0.45; 0.75], $p < .001$. The total indirect effect of our model was significantly different from zero, total indirect effect = 0.31, 95 % CI = [0.15; 0.46], $p = .008$. The indirect A1*B1 effect = 0.07, 95 % CI = [-0.01; 0.30], $p = .12$, was not significant indicating that trauma did not mediate group differences. The indirect effect A2*B2 effect = 0.22, 95 % CI = [0.13; 0.30], $p < .001$ was significant, showing that social support partially mediated group differences between refugees and residents. Also, psychological resilience partially mediated group differences, A3*B3 effect = 0.07, 95 % CI = [0.03; 0.12], $p = .003$. Support by faith did not explain group differences on psychological distress, A4*B4 effect = -0.05, 95 % CI = [-01.4; 0.05], $p = .246$. In addition, we tested different interaction models that were non-significant, all ps $\geq .11$. However, when testing a simple regression model within the refugee group only, religious faith was negatively associated with psychological distress, $B = -0.18$, SE=0.06, $p = .003$, $R^2 = .04$.

[Figure 1 here]

4. Discussion

As expected and consistent with previous findings, refugees reported more psychological distress than residents (Bogic et al., 2015; Richter et al., 2015; Schlechter, Kamp et al., 2021). Refugees also reported more exposure to potentially traumatic events,

less resilience, less perceived social support, and greater perceived support by their faith. Resilience and social support partly accounted for differences between group and psychological distress, but exposure to traumatic events or the perception of support from faith did not.

Exposure to traumatic events makes refugees particularly vulnerable to psychological distress and mental health problems (Al Akash & Boswall, 2014; Thorleifsson, 2014). However, exposure to traumatic events did not account for the differences between refugees and residents with respect to psychological distress. This is in line with findings that trauma alone does not always result in psychological distress, and that other factors may influence this relationship (Cicchetti, 2010; Masten, 2011). Similar results have been reported with respect to different groups of survivors of traumatic stress (Bonanno et al., 2011; Brewin et al., 2000), which highlights the importance of investigating relevant contributing factors for mental health complaints following exposure to traumatic events.

Consistent with previous work, resilience was lower among refugees compared to residents and mediated group differences in psychological distress (Fergus & Zimmerman, 2005; Thomas & Lau, 2002). However, low resilience in the present study only indicates lower resistance to stress (Kocalevent et al., 2015), rather than focusing on an adaptive dynamic process operating at multiple levels (Rutter, 2013). This captures one aspect of resilience but not the global construct of resilience across domains. Cross-cultural studies demonstrate that resilience depends on individual, relational, community, cultural, and contextual factors (Ungar et al., 2008). This again limits the validity of the scale that we employed to measure resilience, as it was designed through the lens of Western culture, neglecting other constructs central to resilience. For example, it neglects the adaptive capability needed to settle in a foreign community, the interpersonal and intrapersonal resources needed to form new relationships with locals or other refugees, to access housing or

education or employment, to reach out to religious communities, and the resources needed to reconnect with families and friends (Hassan et al., 2016; Southwick et al., 2014). Thus, culturally sensitive qualitative data are necessary to elicit specifics of mental health resilience in refugees. From the present study, we can tentatively suggest that enhancing resistance to stress can potentially lower psychological distress among refugees.

Therefore, we looked at more specific factors that may contribute to the variation in mental health. Social support was significantly lower among refugees compared to residents. This may start in the premigration phase when normal life is disrupted, including social events and community gatherings. Further, family and friends may be displaced, may have gone missing, or may have died, which narrows the available social support network (Bogic et al., 2015; Chen et al., 2017; Giacco et al., 2018; Hynie, 2018). During the migration process, refugee groups can often become split up by the availability in transport and financial hardship, the authorities, or by death; mediums to communicate or stay in touch with loved ones might be lost and, hence aggravating social isolation. In the postmigration stage, there are further barriers hindering social support such as cultural and language barriers, discrimination or social tensions in the receiving country (Boswall & Akash, 2015; Chen et al., 2017; Hassan et al., 2016; Thorleifsson, 2014). In line with previous research, differences in perceived social support between the groups partially mediated differences in psychological distress (Bogic et al., 2015; Chen et al., 2017; Giacco et al., 2018; Hynie, 2018). This provides an opportunity for interventions because improving social support would theoretically reduce psychological distress. In a cohort of refugees in Denmark, mental health problems decreased over time as perceived social support increased (Montgomery, 2010). Improving social support also seems to alleviate psychological distress reported by child, adolescent (UNICEF, 2014), and adult refugees (Gorst-Unsworth & Goldenberg, 2008). Therefore, actively supporting or passively allowing refugees to build social networks

would in theory help reduce psychological distress. Longitudinal studies are needed to understand whether there would be benefits in alleviating psychological distress of active interventions over time alone.

Refugees reported more perceived support by faith than German residents. Within the refugee group, a significant effect emerged with religious faith appearing to be protective against psychological distress. This effect, however, did not counteract the effects of lower resilience and social support in the overall model and did therefore not reduce group differences. Also, no group × faith interaction emerged. This may be a by-product of differences regarding the levels of religious faith and psychological distress between both groups with German residents displaying lower levels on both as compared to refugees. Former research suggested that the support Syrian refugees find in their faith may be protective in the face of psychological distress (Sleijpen et al., 2016). This and similar studies, however, were based on small samples (Ai et al., 2005; Boswall & Akash, 2015; Koenig & Shohaib, 2014; Schweitzer et al., 2007) or represented qualitative studies with exclusively female respondents (El-Khani et al., 2017). Our study adds some more nuanced insights to this research line in that religious faith was protective for refugees but not beyond social support and resilience. It may, however, well be that our measure did not capture the subtleties of the role that religion plays or that the translation failed to capture the specific language that might have resonated with the participants in a culturally appropriate way. On the other hand, support perceived by refugees' faith may be more protective in terms of a mental health diagnosis (e.g. Mölsä et al., 2017), but psychological distress may exist regardless of the perceived support. Future studies should assess whether refugees continue to maintain ties with their religious community, and whether perceived support by religious faith changes over time with increased length of stay in the receiving country.

4.1. Limitations

First, the representativeness of the sample in our study is limited. Potentially, group differences are attributable to confounding variables specific to the two online subsamples. However, the sample size was reasonably large and the demographics of the refugee group, especially age and gender, seem to reflect those described by official sources of refugees in Germany (Juran & Broer, 2017). Future studies should attempt to recruit groups through non-online methods and thereby reaching out further into the community of refugees. Second, our design was cross-sectional, and cannot ascertain causality of our mediation models. Longitudinal studies would further our understanding of dynamic processes over time. Third, our study is based on self-report measures that were translated into Modern Standard Arabic. However, the extent to which they maintain their reliability and validity in the translated versions is debatable. The measures have not yet been cross-validated for specific refugee groups. The trauma scale displayed relatively low internal consistency. This may be because this scale used a dichotomous response format and asked for a relatively wide range of potentially experienced events. Still, internal consistencies, distributions, and other measurable outcomes of the other scales used in the present study yielded at least satisfactory values. Last, while we have chosen the constructs guided by a priori considerations based on the current literature, there may be a selection bias in the choice of our measures.

4.2. Conclusions

To conclude, our study highlights the potential role resilience and social support play in coping with psychological distress among refugees in Germany. These findings call for future research to advance our understanding of resilience in refugees and potential intervention studies to promote mental health resilience.

5. References

Ai, A. L., Tice, T. N., Huang, B., & Ishisaka, A. (2005). Wartime faith-based reactions among traumatized Kosovar and Bosnian refugees in the United States. *Mental Health, Religion & Culture*, *8*(4), 291–308.

Al Akash, R., & Boswall, K. (2014). Listening to the voices of Syrian women refugees in Jordan: Ethnographies of displacement and emplacement. In *Refugee Voices Conference.*

Bogic, M., Ajdukovic, D., Bremner, S., Franciskovic, T., Galeazzi, G. M., Kucukalic, A., … Priebe, S. (2012). Factors associated with mental disorders in long-settled war refugees: Refugees from the former Yugoslavia in Germany, Italy and the UK. *British Journal of Psychiatry*, *200*(3), 216–223. https://doi.org/10.1192/bjp.bp.110.084764

Bogic, M., Njoku, A., & Priebe, S. (2015). Long-term mental health of war-refugees: a systematic literature review. *BMC International Health and Human Rights*, *15*(1). https://doi.org/10.1186/s12914-015-0064-9

Bonanno, G. A., Westphal, M., & Mancini, A. D. (2011). Resilience to loss and potential trauma. *Annual Review of Clinical Psychology*, *7*, 511–535. https://doi.org/10.1146/annurev-clinpsy-032210-104526

Boswall, K., & Akash, R. Al. (2015). Personal perspectives of protracted displacement: an ethnographic insight into the isolation and coping mechanisms of Syrian women and girls living as urban refugees in northern Jordan. *Intervention*, *13*(3), 203–215. https://doi.org/10.1097/WTF.0000000000000097

Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology*, *68*(5), 748–766. https://doi.org/10.1037//0022-006X.68.5.748

Chen, W., Hall, B. J., Ling, L., & Renzaho, A. M. (2017). Pre-migration and post-migration

factors associated with mental health in humanitarian migrants in Australia and the moderation effect of post-migration stressors: findings from the first wave data of the BNLA cohort study. *The Lancet Psychiatry*, *4*(3), 218–229. https://doi.org/10.1016/S2215-0366(17)30032-9

Cicchetti, D. (2010). Resilience under conditions of extreme stress: a multilevel perspective. *World Psychiatry : Official Journal of the World Psychiatric Association (WPA)*, *9*(3), 145–154. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/20975856

El-Khani, A., Ulph, F., Peters, S., & Calam, R. (2017). Syria: coping mechanisms utilised by displaced refugee parents caring for their children in pre-resettlement contexts. *Intervention*, *15*(1), 34–50. https://doi.org/10.1097/WTF.0000000000000136

Elsass, P., & Phuntsok, K. (2009). Tibetans' coping mechanisms following torture: An interview study of Tibetan torture survivors' use of coping mechanisms and how these were supported by western counseling. *Traumatology*, *15*(1), 3–10.

Fazel, M., Wheeler, J. , & Danesh, J. (2005). Prevalence of serious mental disorder in 7000 refugees resettled in. *Lancet*, *365*(9467), 1309–1314. Retrieved from https://search-proquest-com.kuleuven.ezproxy.kuleuven.be/docview/199005701/fulltextPDF/6ADB41F9BE454EE6PQ/1?accountid=17215

Fergus, S., & Zimmerman, M. A. (2005). Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annual Review of Public Health*, *26*, 399–419.

Fritz, J., de Graaff, A. M., Caisley, H., Van Harmelen, A. L., & Wilkinson, P. O. (2018). A systematic review of amenable resilience factors that moderate and/or mediate the relationship between childhood adversity and mental health in young people. *Frontiers in Psychiatry*, *9*.

Gerritsen, A. A. M., Bramsen, I., Devillé, W., van Willigen, L. H. M., Hovens, J. E., & van der Ploeg, H. M. (2006). Physical and mental health of Afghan, Iranian and Somali asylum seekers and refugees living in the Netherlands. *Social Psychiatry and Psychiatric Epidemiology*, *41*(1), 18–26. https://doi.org/10.1007/s00127-005-0003-5

Giacco, D., Laxhman, N., & Priebe, S. (2018). Prevalence of and risk factors for mental disorders in refugees. *Seminars in Cell and Developmental Biology*, *77*, 144–152. https://doi.org/10.1016/j.semcdb.2017.11.030

Gorst-Unsworth, C., & Goldenberg, E. (2008). Psychological sequelae of torture and organised violence suffered by refugees from Iraq. *British Journal of Psychiatry*, *172*(01), 90–94. https://doi.org/10.1192/bjp.172.1.90

Hassan, G., Ventevogel, P., Jefee-Bahloul, H., Barkil-Oteo, A., & Kirmayer, L. J. (2016). Mental health and psychosocial wellbeing of Syrians affected by armed conflict. *Epidemiology and Psychiatric Sciences*, *25*(2), 129–141. https://doi.org/10.1017/S2045796016000044

Hayes, A. F. (2015). An index and test of linear moderated mediation. Multivariate Behavioral Research, 50(1), 1-22 Ho, K. P., Hunt, C., & Li, S. (2008). Patterns of help-seeking behavior for anxiety disorders among the Chinese speaking Australian community. *Social Psychiatry and Psychiatric Epidemiology*, *43*(11), 872-877.

Henkelmann, J. R., de Best, S., Deckers, C., Jensen, K., Shahab, M., Elzinga, B., & Molendijk, M. (2020). Anxiety, depression and post-traumatic stress disorder in refugees resettling in high-income countries: systematic review and meta-analysis. *BJPsych Open*, *6*(4).

Hynie, M. (2018). The Social Determinants of Refugee Mental Health in the Post-Migration Context: A Critical Review. *Canadian Journal of Psychiatry*, *63*(5), 297–303. https://doi.org/10.1177/0706743717746666

Juran, S., & Broer, P. N. (2017). A Profile of Germany's Refugee Populations. *Population and Development Review*, *43*(1), 149–157. https://doi.org/10.1111/padr.12042

Khawaja, N. G., White, K. M., Schweitzer, R., & Greenslade, J. H. (2008). The difficulties and coping strategies of Sudanese Refugees pre, during and postmigration: A qualitative approach. *Transcultural Psychiatry*, *45*(3), 489–512.

Kocalevent, R. D., Zenger, M., Heinen, I., Dwinger, S., Decker, O., & Brähler, E. (2015). Resilience in the general population: Standardization of the resilience scale (RS-11). *PLoS ONE*, *10*(11), 1–15. https://doi.org/10.1371/journal.pone.0140322

Koenig, H. A. G., & Shohaib, S. A. (2014). *Health and well-being in Islamic societies.* Basel, Switzerland: Springer International Publishing.

Leaman, S. C., & Gee, C. B. (2012). Religious coping and risk factors for psychological distress among African torture survivors. *Psychological Trauma: Theory, Research, Practice, and Policy*, *4*(5), 457.

Lewis-Fernández, R., & Kirmayer, L. J. (2019). Cultural concepts of distress and psychiatric disorders: Understanding symptom experience and expression in context. *Transcultural Psychiatry*, *56*(4), 786–803. https://doi.org/10.1177/1363461519861795

Li, S. S. Y., Liddell, B. J., & Nickerson, A. (2016). The Relationship Between Post-Migration Stress and Psychological Disorders in Refugees and Asylum Seekers. *Current Psychiatry Reports*, *18*(9), 1–9. https://doi.org/10.1007/s11920-016-0723-0

Lindencrona, F., Ekblad, S., & Hauff, E. (2008). Mental health of recently resettled refugees from the Middle East in Sweden: The impact of pre-resettlement trauma, resettlement stress and capacity to handle stress. *Social Psychiatry and Psychiatric Epidemiology*, *43*(2), 121–131. https://doi.org/10.1007/s00127-007-0280-2

Masten, A. S. (2011). Resilience in children threatened by extreme adversity: Frameworks for research, practice, and translational synergy. *Development and Psychopathology*,

23(2), 493–506. https://doi.org/10.1017/S0954579411000198

Mölsä, M., Kuittinen, S., Tiilikainen, M., Honkasalo, M. L., & Punamäki, R. L. (2017). Mental health among older refugees: the role of trauma, discrimination, and religiousness. *Aging and Mental Health*, *21*(8), 829–837. https://doi.org/10.1080/13607863.2016.1165183

Momartin, S., Silove, D., Manicavasagar, V., & Steel, Z. (2004). Comorbidity of PTSD and depression: associations with trauma exposure, symptom severity and functional impairment in Bosnian refugees resettled in Australia. *Journal of Affective Disorders*, *80*(2–3), 231–238.

Montgomery, E. (2010). Trauma and resilience in young refugees: A 9-year follow-up study. *Development and Psychopathology*, *22*(2), 477–489. https://doi.org/10.1017/S0954579410000180

Morina, N., & Nickerson, A. (2018). Mental health of refugee and conflict-affected populations: Theory, research and clinical practice. *Mental Health of Refugee and Conflict-Affected Populations: Theory, Research and Clinical Practice*, (January), 1–396. https://doi.org/10.1007/978-3-319-97046-2

R Core Team (2019). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from http://www.R project.org/

Reed, R. V., Fazel, M., Jones, L., Panter-Brick, C., & Stein, A. (2012). Mental health of displaced and refugee children resettled in low-income and middle-income countries: risk and protective factors. *The Lancet*, *379*(9812), 250–265.

Richter, K., Lehfeld, H., & Niklewski, G. (2015). Waiting for asylum: psychiatric diagnosis in bavarian admission center. *Health Care (Federal Association of Physicians of the Public Health Services (Germany))*, *77*(11), 834–838.

Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling and more. Version 0.5–12 (BETA). *Journal of Statistical Software*, *48*(2), 1-36.

Rutter, M. (2013). Annual research review: Resilience–clinical implications. *Journal of Child Psychology and Psychiatry*, *54*(4), 474–487.

Satinsky, E., Fuhr, D. C., Woodward, A., Sondorp, E., & Roberts, B. (2019). Mental health care utilisation and access among refugees and asylum seekers in Europe: A systematic review. *Health Policy*. https://doi.org/10.1016/j.healthpol.2019.02.007

Satow, L. (2012). Stress and Coping Inventory (SCI): test and scale documentation.

Schlechter, P., Hellmann, J. H., Wingbermühle, P., & Morina, N. (2021). Which psychological characteristics influence therapists' readiness to work with refugees? *Clinical Psychology & Psychotherapy, 28*(2), 334-344. Doi: 10.1002/cpp.2508

Schlechter, P., Kamp, S., Wanninger, K., Knausenberger, J., Wagner, U., Wilkinson, P. O., ... & Hellmann, J. H. (2021). Help-Seeking Attitudes and Distress Disclosure Among Syrian Refugees in Germany. *The Counseling Psychologist*, *49*(3), 330-352. https://doi.org/10.1177%2F0011000020974934

Schlechter, P., Wilkinson, P. O., Knausenberger, J., Wanninger, K., Kamp, S., Morina, N., & Hellmann, J. H. (2021). Depressive and anxiety symptoms in refugees: Insights from classical test theory, item response theory, and network analysis. *Clinical Psychology & Psychotherapy, 28*(1), 169-181. DOI:10.1002/cpp.2499

Schulz, H., Lang, K., Nübling, R., & Koch, U. (2003). Psychometrische Überprüfung einer Kurzform des Fragebogens zur Psychotherapiemotivation - FPTM-23. *Diagnostica*, *49*(2), 83–93. https://doi.org/10.1026//0012-1924.49.2.83

Schweitzer, R., Greenslade, J. H., & Kagee, A. (2007). Coping and resilience in refugees from the Sudan: a narrative account. *Australian and New Zealand Journal of Psychiatry*, *41*(3), 282–288.

Shrestha, N. M., Sharma, B., Van Ommeren, M., Regmi, S., Makaju, R., Komproe, I., … de Jong, J. T. V. M. (2003). Impact of Torture on Refugees Displaced Within the Developing World. *Jama*, *280*(5), 443. https://doi.org/10.1001/jama.280.5.443

Sleijpen, M., Boeije, H. R., Kleber, R. J., & Mooren, T. (2016). Between power and powerlessness: A meta-ethnography of sources of resilience in young refugees. *Ethnicity and Health*, *21*(2), 158–180. https://doi.org/10.1080/13557858.2015.1044946

Southwick, S. M., Bonanno, G. A., Masten, A. S., Panter-Brick, C., & Yehuda, R. (2014). Resilience definitions, theory, and challenges: Interdisciplinary perspectives. *European Journal of Psychotraumatology*, *5*. https://doi.org/10.3402/ejpt.v5.25338

Steel, Z., Chey, T., Marnane, C., Bryant, R. A., & Ommeren, M. Van. (2009). Association of torture and other potentially traumatic events with mental health outcomes among populations exposed to mass conflict and displacement: a systematic review and meta-analysis. *JAMA*, *302*(5), 537–549.

Thorleifsson, C. (2014). Coping strategies among self-settled Syrians in Lebanon. *Forced Migration Review*, *47*(23).

Tummala-Narra, P. (2007). Conceptualizing trauma and resilience across diverse contexts: A multicultural perspective. *Journal of Aggression, Maltreatment & Trauma*, *14*(1–2), 33–F53.

Turrini, G., Purgato, M., Ballette, F., Nosè, M., Ostuzzi, G., & Barbui, C. (2017). Common mental disorders in asylum seekers and refugees: Umbrella review of prevalence and intervention studies. *International Journal of Mental Health Systems*, *11*(1), 1–14. https://doi.org/10.1186/s13033-017-0156-0

Ungar, M., Liebenberg, L., Boothroyd, R., Kwong, W. M., Lee, T. Y., Leblanc, J., & Maknach, A. (2008). The study of youth resilience across cultures: Lessons from a pilot study of measurement development. *Research in Human Development*, *5*(3), 166–180.

UNHCR (2020). *Global trends: Forced displacement in 2020*. Geneva, Switzerland.

UNICEF (2014). *Mental Health/ Psychosocial and Child Protection for Syrian Adolescent Refugees in Jordan*. Amman, Jordan.

Table 1. Demographic characteristics

Full sample (N = 410)	Residents (n = 205)	Refugees (n = 205)
Age (years)	M = 26.32 (SD = 9.67)	M = 30.32 (SD = 9.19)
Gender		
Female	68% (140)	30% (31)
Male	32% (65)	70% (174)
Country of origin		
Syria	-	194(95%)
Other	-	11 (5%)
Reasons for leaving the home country*		
War	-	172
Fear of being recruited for military services	-	128
Political persecution	-	122
Religious persecution	-	36
Violence	-	72
Economic reasons	-	31

Note. Country of origin and reasons for leaving the home country could only be reported by refugees. *multiple reasons could be named

Table 2. Mean scores with standard deviations in parentheses and simple regression models with group (Refugees = 1; Residents = 0) as predictor (controlling for gender)

	Residents	Refugees	*B*	*SE*	*p*	R^2
Psychological distress	1.90 (0.81); α = .88	2.50 (0.76); α = .71	0.54	0.09	< .001	.13
Traumatic events	0.22 (0.61), α = .65	1.22 (0.99), α = .53	1.00	0.10	< .001	.27
Social support	3.28 (0.66); α = .89	2.44 (0.85); α = .86	-0.81	0.09	< .001	.23
Resilience	5.17 (0.90); α = .87	4.85 (0.99); α = .81	-0.38	0.11	< .001	.03
Support by religious faith	1.82 (0.80); α = .87	2.86 (0.88); α = .87	1.11	0.10	< .001	.28

Note. SE = Standard Error

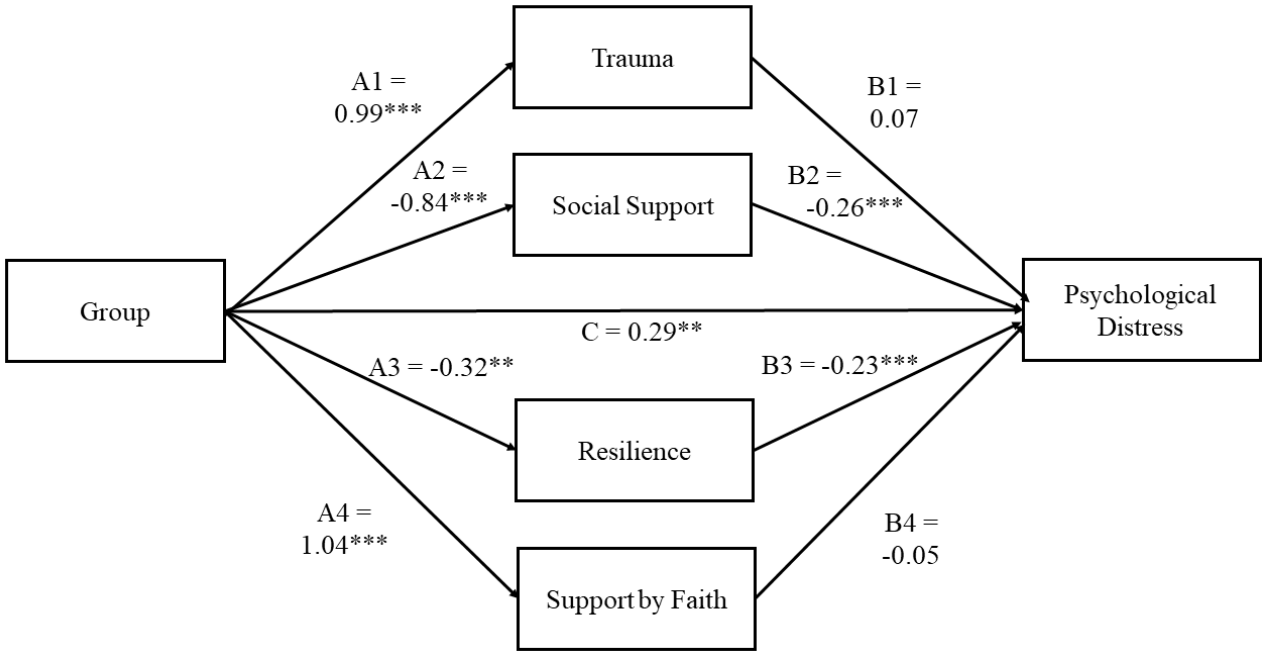

Figure 1. ** $p < .01$, *** $p < .001$; Group: refugees coded with 1, residents coded with 0

Conflict of interest

The authors declare that they have no conflict of interest.

Pascal Schlechter: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Visualization; Writing - original draft; Writing - review & editing

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