Original Article

I|J|S|P

International Journal of
Social Psychiatry
1–10
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DOI: 10.1177/00207640211010207
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The relationship between religiosity/spirituality and quality of life among female Eritrean refugees living in Norwegian asylum centres

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Abstract

Background: Women are more vulnerable to mental health problems than men after migration, but little is known about the influence of religiosity/spirituality on their quality of life. The purpose of this study was to explore religiosity/spirituality, in relationships with various domains of quality of life, among female Eritrean refugees staying in Norwegian asylum centres.

Method: A questionnaire assessing sociodemographic characteristics was used together with the World Health OrganizationQuality of Life – Spirituality, Religiosity and Personal Beliefs (WHOQOL-SRPB) questionnaire, which assesses religiosity/spirituality and domains of quality of life. A total of 63 adult female Eritrean refugees who had been granted asylum but were still living in asylum reception centres located in southern and central Norway participated.

Results: Religiosity/spirituality was independently associated with psychological quality of life ($B = 0.367$, $p < .001$), level of independence ($B = 0.184$, $p = .028$), social quality of life ($B = 0.500$, $p = .003$), environmental quality of life ($B = 0.323$, $p < .001$) and overall quality of life ($B = 0.213$, $p < .001$), but not with physical quality of life ($B = 0.056$, $p = .679$). There were no significant differences between religious affiliations on religiosity/spirituality or quality of life measures.

Conclusion: Consistent with previous research, this study highlights the correlation between religiosity/spirituality and overall quality of life. We recommend a longitudinal follow-up study of similar populations, after they are resettled and integrated into their host countries, to understand the associations between quality of life and religiosity/spirituality over time.

Keywords

Eritrea, refugees, religiosity, spirituality, quality of life, well-being

Introduction

Women are particularly vulnerable to violence, human trafficking, and lack of food during migration (UNHCR, 2006). Religiosity/spirituality may protect individuals against uncertainty, making it particularly important when people experience stressful events. Thus, religiosity/spirituality may have a stress-buffering or moderating influence and be an important resource for people coping with traumatic experiences (Park et al., 2017; Shannon et al., 2013; Winter et al., 2009). Women generally score higher than men on measures of both public and private religious practices and spirituality. Jones et al. (2011) claim that men are more likely to turn to private forms of religious expression, while women are more active and demonstrative in their participation in the social aspects of religiosity.

For many people, religious and/or spiritual beliefs constitute a substantial part of their global meaning system,

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informing how they understand, react to and cope with suffering (Jim et al., 2015). According to Gostečnik et al. (2014) re-traumatisation events in victims of trauma may cause strong ambivalence towards God and a general conflictual relationship to religiosity. While they may lose faith in God, they may also blame God for not having protected them, for having left them to feel so alone, for having been indifferent towards them or they may even turn against God as the source of cruelty.

Religion is a strong influential force in Sub-Saharan Africa, where over 80% of the population identify themselves with an established belief system (Velayati et al., 2007). Religious practice and commitment are among the central strategies used by southern Sudanese refugees in resettlement (Baird, 2012; Shakespeare-Finch & Wickman, 2010). East African refugees in the United States have strong cultural, religious, and traditional health practices (Simmelink et al., 2013). In a qualitative study on coping and resilience among female Eritrean refugees (Abraham et al., 2018), participants pointed to their religious beliefs as helpful in coping with trauma and their present situation, as well as being a source of hope for the future.

Background

Eritrea is officially a secular state but recognises the Eritrean Orthodox Church, the Eritrean Catholic Church, the Evangelical Lutheran Church of Eritrea, and Sunni Islam. In practice, no other religions may officially be registered (World Population Review, 2019). Regardless of their faith, Eritreans have always coexisted peacefully with no known extremist tendencies.

After thirty years of struggle for independence between Eritrea and Ethiopia, the war ended in 1991 but erupted again in 1998 (Bailliet, 2007). Unresolved border disputes and the United Nation's sanctions against Eritrea kept the nation in a 'no war, no peace' situation. By the end of 2016, the desire to escape these challenges, as well as the extended mandatory military service, had led 459,400 persons (more than 12% of the total population) to flee from Eritrea. Between 2003 and 2018, more than 24,700 Eritrean refugees sought asylum in Norway (UDI, 2018), a third of these being women. Seeking asylum in Norway generally starts with a lengthy stay in a transitional asylum centre, before resettlement in a municipality.

The religious communities within Eritrea are unique in that they are evenly split. Roughly 2% of the population claims to have no religion. The remaining 98% is split down the middle: 49% Christian and 49% Muslim, although the precise numbers are somewhat debated. The population of the high plateau is predominantly Christian, whereas that of the lowlands and the coastal areas are predominantly Muslim.

According to Thapa and Hauff (2005), women are more vulnerable than men when it comes to developing mental health problems after migration. Furthermore, changes in gender roles and expectations after migration also influence the way women respond to the stress of migration and post-migration adaptation (Bhugra & Ruiz, 2011).

Baird (2012) and Gozdziak et al. (2005) claim that in spite of the large numbers of female refugees, their experiences are largely understudied and ignored. Furthermore, the role of religion and spirituality in forced migration tends to be minimized and neglected by researchers and policy makers when planning interventions and services for refugees (Baird, 2012). Most research on religiosity and spirituality is conducted in western cultures and on Christian populations (Meyers et al., 2017). Female refugees and asylum seekers, particularly those who are not Christian, are less studied, and studies on the meaning of religion and spirituality in these populations are sparse.

In a systematic review of studies among asylum seekers living in transitional countries, Posselt et al. (2019) identified the following factors as enablers of psychological well-being: social support; faith, religion and spirituality; cognitive strategies; education and training opportunities; employment and economic activities; behavioural strategies; political advocacy; and environmental conditions. Similarly, spirituality has also been shown to be important for the mental health, better quality of life and well-being of refugees in Europe (Pandya, 2018).

To our knowledge, there are few studies examining religiosity/spirituality among female refugees living in asylum centres in industrialized countries. The goal of this present study is to explore the relationships between religiosity/spirituality and different domains of quality of life. Based on our previous study of female Eritrean refugees (Abraham et al., 2018), we hypothesised that religiosity/spirituality has a positive influence on quality of life in this group of female Eritrean refugees living in Norwegian asylum centres.

Method

The present analysis is part of a larger study exploring coping and resilience among the same population. The qualitative findings have been previously published (Abraham et al., 2018), and this paper focuses on the study's quantitative findings.

Participants and procedures

This study of female refugees was conducted in eight asylum reception centres in southern and central Norway, that are privately run but supervised by the Norwegian Directorate of Immigration (UDI). We chose the centres with a fairly large number of Eritrean women. The first author contacted these centres and conducted seminars to inform the Eritrean residents about the study before potential participants were invited. A total of 210 female Eritrean

refugees attended the seminars, and 126 of these expressed interest and fulfilled the inclusion criteria. Of these, 98 were enrolled in the study and given the questionnaires, of which 66 were returned. As three sets of questionnaires were incomplete, the final number of respondents included in the analysis was 63.

Inclusion criteria: All respondents were above 18 years of age, were able to understand Eritrea's major language of Tigrinya and had obtained refugee status (i.e. were granted asylum) but were still living in an asylum reception centre. They had to be in Norway 1 to 5 years, thereby ensuring relatively recent migration experiences, while also having ample experience with life in the host country. An education level of eighth grade or above was required to make sure that participants understood the content of the information provided about the study. Both oral and written information were in Tigrinya.

Measures

The Sociodemographic Characteristics and Migration History Questionnaire was developed specifically for this study. It included questions about the respondent's age, marital status, religion and whether they had recently converted, number of children, whether they had been in the military service and if so, their experience with it, and why they left Eritrea. Questions also covered their journey to the host country (Norway), any experiences of sexual abuse and/or other trauma, history of alcohol or drug use, reason for choosing the host country, positive and negative experiences in the host country, whether they had relatives in the host country, and their future plans.

Religiosity/spirituality and different domains of quality of life were assessed through the use of the World Health on Spirituality, Religiousness and Personal Beliefs (SRPB) (WHO, 2002). The WHOQOL-Organization Quality of Life – Spirituality, Religiosity and Personal Beliefs (WHOQOL-SRPB) that consists of 100 items on Quality of Life (QoL) and 32 items SRPB part comprises a wide range of questions on spiritual, religious, and personal beliefs that may or may not be associated with any formal belief system or group. This assessment tool has been developed from a wide-ranging pilot test of 105 questions in 18 study sites around the world. The resulting 32-item assessment tool represents the finalized version of the WHOQOL-SPRB to be used for field trials. The items cover quality of life aspects related to spirituality, religiousness and personal beliefs (SRPB).

Quality of life was assessed in the following five domains: physical (domain I) – seven items, psychological (domain II) – six items, level of independence (domain III) – four items, social (domain IV) – three items, and environmental (domain V) – eight items. The overall QoL and general health (four items) were used as separate domains. All the items were scored on a 5-point Likert scale. Higher scores mean better quality of life. Domain VI focuses specifically on SRPB and comprises eight facets: connectedness to a spiritual being or force; meaning and purpose in life; experience of awe and wonder; wholeness and integration; spiritual strength; inner peace/serenity/harmony; hope and optimism; and faith. Facets are scored through cumulative scaling. Each item contributes equally to the facet score. Mean scores are then calculated. According to WHO's manual, all the items in the respective facet are added and divided by four. Each facet is taken to contribute equally to the domain score.

Domain VI was used as the primary measure of religiosity/spirituality and calculated by computing the mean of the facet score within the domain according to the WHO's manual, using the sum of four items. For the purposes of the present study, domain scores were presented as item means.

To ensure cultural adaptation to Tigrinya, the instrument was back-and-forward translated from English to Tigrinya by proficient bilingual and bicultural translators, the result scrutinised by a third bilingual person. They facilitated translations that were both linguistically correct and culturally adapted.

Both questionnaires were piloted by two focus groups with a total of eight participants. Based on the feedback, some adjustments were made before the study was started.

Statistical analysis

Data was analysed using Statistical Package for Social Sciences (SPSS) software, version 25. The statistical methods included Spearman's rank-order correlations for testing the relationship between the five domains of quality of life and overall QoL, Kruskal-Wallis tests and analysis of variance (ANOVA) with post hoc tests were used to compare different religious groups on measures of religiosity/spirituality, various domains of quality of life, and overall QoL. Further multivariate regression models were computed, testing the association between respondent demographics and religiosity/spirituality (domain VI) as explanatory variables and the five domains of quality of life and overall QoL score as dependent variables. Demographic variables that might be considered strengths (protective factors) or vulnerabilities (risk factors) were included as covariates, due to their associations with the adaptive outcomes of resilience and posttraumatic growth mediated by religiosity (Marciano et al., 2019; Schaefer et al., 2018). For the purpose of the regression models, the number of children and years of education were dichotomized, using the median.

Ethical considerations

Ethical approval was obtained from the Regional Committee for Medical and Health Research Ethics, South-Eastern Norway (2015/982/REK Sor-Ost), and the

Norwegian Directorate of Immigration, which is responsible for the asylum centres. An informed consent form in Tigrinya was signed by all participants before they answered the questionnaires. We informed all potential respondents about and assured confidentiality. Potential respondents were also informed that they were free to abstain from participation and that those who chose to participate were free to withdraw from the study at any time without any negative consequences. The first author, a female Tigrinya-speaking psychiatrist with a refugee background, conducted all data collection. When required, medical and psychosocial support were provided during and after filling in the questionnaires.

Results

Characteristics of the study population

The demographic characteristics of the study sample are presented in Table 1. Of the 63 participants, 34 (55%) had left Eritrea for political and 28 (45%) for economic reasons. The participants' mean age was 29.5 years (range 18–56 years). The majority of the respondents were young (75% were under 30 years of age), which may explain why most (65%) had been enrolled in the mandatory military service. The average waiting time for resettlement was 9.6 months before and 10.6 months after receiving the residence permit. Almost half of the respondents were married, one third had children, and about half had relatives in Norway. Regarding their religious affiliations, 31 (49%) were Coptic Orthodox, 14 (22%) Catholic, 10 (16%) Muslim and 9 (14%) were Protestant.

Table 1. Sociodemographic characteristics of the sample ($N = 63$).

Variable	Mean (*SD*) or *N* (%)
Age, mean (*SD*)	29.5 (9)
Marital status	
Married	31 (51)
Years of education	
8–10	23 (37)
11–12	33 (52)
13–14	7 (11)
Number of children	
0	43 (68)
1–2	12 (19)
3–4	8 (13)
Religion	
Orthodox	31 (49)
Catholic	14 (22)
Muslim	10 (16)
Protestant	9 (14)
Attended military service	41 (65)
Reason for immigration	
Political	34 (55)
Economic	28 (45)
Time spent waiting for residence permit	
1–5 months	21 (33)
6–10 months	23 (37)
11–15 months	12 (19)
>15 months	7 (11)
Time after residence permit	
⩽5 months	15 (24)
6–11 months	24 (38)
12–17 months	19 (30)
>17 months	5 (8)
Has relatives in Norway	30 (48)

Note. *N* = number of participants; *SD* = standard deviation.

Comparison of religious groups

There were no significant differences between Coptic Orthodox, Catholics, Muslims or other religious affiliations on any of the religiosity/spirituality, QoL measures (Table 2).

Correlations between religiosity/spirituality and quality of life

As shown in Table 3, we found high correlations between religiosity/spirituality and different aspects of quality of life, except physical quality of life. The strongest correlations were for psychological and social quality of life.

Factors independently associated with different types of quality of life

In the multivariate regression analyses, quality of life domains II-V (psychological QoL, level of independence, social QoL, environmental QoL) and overall QoL were used as dependent variables, while age, education, number of children, duration of stay in Norway, having close relatives in Norway, obligatory military service in Eritrea and religiosity/spirituality (as measured by SRPB domain IV) were used as explanatory variables.

As shown in Table 4, religiosity/spirituality was independently associated with psychological quality of life ($B = 0.367$, $p < .001$), level of independence ($B = 0.184$, $p = .028$), social quality of life ($B = 0.500$, $p = .003$), environmental quality of life ($B = 0.323$, $p < .001$), and general quality of life ($B = 0.213$, $p < .001$). The variance explained by these models ranged from 38% to 48%.

Discussion

The study results show that religiosity/spirituality is independently associated with psychological, social and environmental quality of life, level of independence and overall

Table 2. Comparison of religiosity/spirituality (eight SRPB facets and domain VI), quality of life domains (I–V) and overall QoL among Eritrean female refugees of different religions.

	Orthodox			Catholic			Muslim			Protestant		
	N	*MN*	*SD*	*N*	*MN*	*SD*	*N*	*MN*	*SD*	*N*	*MN*	*SD*
SRPB facets												
Spiritual connection	31	3.88	0.76	14	3.77	0.74	10	4.20	0.73	8	3.84	0.87
Meaning and purpose in life	30	3.53	0.66	13	3.65	0.59	10	3.78	0.712	8	3.25	0.74
Experiences of awe and wonder	31	3.25	0.60	14	3.43	0.72	10	3.85	0.73	8	3.16	0.58
Wholeness and Integration	30	3.03	0.86	12	3.48	0.84	10	3.58	0.92	8	2.93	0.99
Spiritual strength	31	3.76	0.78	14	3.88	0.76	10	3.98	0.60	8	3.41	0.81
Inner peace	31	3.21	0.94	14	3.20	0.86	10	3.40	0.53	7	2.89	0.78
Hope and optimism	31	3.46	0.81	14	3.52	0.70	10	3.88	0.74	8	3.00	0.73
Faith	31	3.78	0.79	14	4.00	0.83	10	4.05	0.85	8	3.84	0.72
Domains (quality of life)												
Physical (I)	31	10.72	2.13	14	9.90	1.68	10	10.23	1.83	8	10.21	1.53
Psychological (II)	31	11.57	1.53	14	11.43	1.53	10	11.38	2.08	8	10.78	1.25
Level of independence (III)	31	13.6	1.66	14	13.27	1.31	10	12.73	1.46	8	12.78	1.21
Social (IV)	21	12.49	1.71	9	11.44	1.79	6	12.44	2.99	5	11.60	2.53
Environmental (V)	31	11.14	1.68	14	10.24	1.11	10	10.18	1.26	8	10.05	1.77
Spirituality/religion/personal beliefs (VI)	29	14.04	2.44	11	14.08	2.54	10	15.37	2.36	7	13.24	2.88

Note. ANOVA (including post-hoc tests) and Kruskal Wallis tests were not statistically significant, therefore *p*-values are not reported. SPRB = spirituality/religiosity/personal beliefs; QoL = quality of life; *N* = number of participants; *SD* = standard deviation; *MN* = mean.

Table 3. Correlations between religiosity/spirituality, domains of quality of life, and overall QoL, Spearman's coefficient (*p*-value).

	Psychological	Level of independence	Social	Environmental	Spirituality/ religion/ personal beliefs
Physical	.069 (.593)	.166 (.194)	.013 (.936)	.156 (.222)	.056 (.679)
Psychological		**.362 (.004)**	**.501 (.001)**	**.415 (.001)**	**.562 (<.001)**
Level of independence			**.686 (<.001)**	**.504 (<.001)**	**.282 (<.001)**
Social				**.502 (.001)**	**.494 (.001)**
Environmental					**.408 (.002)**

Note. The bold entries are statistically significant values. QoL = quality of life.

quality of life, in this sample of Eritrean refugees. We found no differences on measures of religiosity/spirituality, different domains of QoL between the religious affiliations compared in this study. This may be explained by a shared belief in a fair and just world and a benevolent, loving God independent of the participants' religious affiliation. This is especially relevant in the Eritrean community where religion and spirituality play an important part in daily social and political life (Hepner, 2003).

A growing body of research investigates the role that spirituality and religiosity play in individuals' self-perceived well-being and quality of life, identifying a positive effect of religion and spirituality on many psychosocial and health-related outcomes across the lifespan (Krause, 2012; VanderWeele, 2017). Religious activities and spiritual experiences tend to be independently associated with health, well-being and quality of life (Maselko & Kubzansky, 2006; Shahabi et al., 2002).

For many people, their religious/spiritual beliefs comprise a substantial part of their global meaning system, informing how they understand, react to and cope with suffering (Jim et al., 2015). Religiosity has also been shown to moderate the relationship between self-efficacy and traumatic stress (Israel-Cohen et al., 2016). Particularly in populations exposed to trauma, religiosity/spirituality has been reported as an important coping mechanism (Carlson et al., 2012; Falsetti et al., 2003). This is also in line with the results of the qualitative part of this project (Abraham et al., 2018) where participants reported how they experienced severe physical and psychological traumas both in the Eritrean military service and during their flight. Results are published elsewhere (Abraham et al., 2018).

Psychological quality of life was strongly correlated to religiosity/spirituality in our study. This finding is consistent with that of Ismail and Deshmukh (2012), who show a

Table 4. Multivariate linear regression models: association between explanatory variables and QoL as dependent variables the four domains of quality of lifeand overall.

	Psychological (domain II)		Level of independence (domain III)		Social (domain IV)		Environmental (domain V)		General QoL (overall score)	
	Durbin Watson = 1.929		Durbin Watson = 1.771		Durbin Watson = 2.389		Durbin Watson = 1.659		Durbin Watson = 1.637	
	N = 57		*N* = 57		*N* = 41		*N* = 57		*N* = 57	
	B	*p*-Value	*B*	*p*-Value	*B*	*p*-Value	*B*	*p*-Value	*B*	*p*-Value
Age	.040	.212	.002	.957	−.002	.967	.013	.713	.010	.544
Months of residence in Norway	−.047	.191	−.091	.017	−.089	.085	−.041	.287	−.030	.116
Relatives in Norway	.132	.725	−.706	.077	−.616	.346	.049	.904	.161	.415
Number of children	−.067	.910	−.233	.706	.279	.755	−.263	.680	.235	.450
Years of education	.170	.668	−.246	.556	.507	.437	.545	.208	.139	.506
Marital status	−.677	.188	.679	.208	.156	.856	.256	.643	−.342	.206
Military service	.407	.320	−.119	.781	−.153	.807	.092	.834	.184	.394
Spirituality/religion/personal beliefs (domain VI)	.367	**<.001**	.184	**.028**	.500	.003	.323	**<.001**	.213	**<.001**

Note. Explained variance (R^2): psychological quality of life = 0.448; level of independence = 0.388; environmental quality of life = 0.338; social quality of life = 0.415; overall quality of life = 0.477. Physical quality of life (domain I) was not included in the multivariate analyses because it was not associated with religiosity/spirituality in bivariate analyses. The bold entries are statistically significant values. QoL = quality of life; *B* = regression coefficient.

strong positive relationship between religiosity and psychological well-being in general.

Zukerman and Korn (2014) suggest that religion-related cognitive schemas directly affect world assumptions by creating protective shields that may prevent the negative mental effects of extremely negative experiences. Peres et al. (2018) found an association between faith/religiousness and better psychological quality of life, and religious study participants found greater meaning and peace than nonreligious participants.

Shannon et al. (2013), suggest that there is a significant relationship between spirituality and positive psychological outcomes when exposed to violence. A study among victims of the Ethio-Eritrean war (Nordanger, 2007) stressed the importance of praying and being grateful to God rather than complaining. Hence, religion may be a potential buffer against psychological distress and an important factor in subjective well-being and better quality of life. Kalra et al. (2012) further emphasise that psychosocial and existential well-being may provide a buffer against mental illness.

Our study shows a strong correlation between religiosity/spirituality and *social* quality of life. The salutary effects of religious involvement on mental health partly stem from the social resources afforded within religious communities. Socio-cultural support and spirituality are among the generalised resistance resources (GRR) pointed out by Antonovsky that help build a strong sense of coherence (Eriksson, 2016). Indeed, several studies have attributed the apparent health benefits of church attendance to the role of congregations as sources of social integration and support (Pescosolido & Georgianna, 1989). For instance, Vietnamese refugee parents stressed that a religious community was important in socialising and creating a sense of belonging in their children (Tingvold et al., 2012).

Minority groups may rely on religious stratagems to cope with their distress more than other groups (Chaaya et al., 2007). Culturally-adapted spiritual ceremonies may facilitate an individual's capacity to contain and integrate traumatic memories, promote restorative self-awareness, and engage community support (Agger et al., 2012). Furthermore, the cultural aspect of religious belonging appears to be salient, suggesting that an important advantage of religious communities for life satisfaction lies in their ability to foster a sense of solidarity and commitment through a shared framework of meaning (Ten Kate et al., 2017). However, this view is debated. In a meta-analysis of 34 studies conducted between 1999 and 2002, Hackney and Sanders (2003) found that personal devotion (subjective religious orientation) produced the strongest correlation with positive psychological functioning (happiness, life satisfaction) and that institutional religiosity (organisational religious orientation such as participation at church/mosque activities) created the weakest correlation.

According to our findings, religiosity/spirituality is also correlated with *environmental* quality of life. Together with socioeconomic deprivation, environmentally adverse conditions produce health deficits (Banzhaf et al., 2014). The combination of pre-flight and flight trauma and the conditions at the asylum centre created an inconducive

environment for female Eritrean refugees (Abraham et al., 2018). Moreover, the 'endless waiting' for permanent resettlement was described as very difficult. Several studies have focused on the effects of the long waiting period inherent in the asylum procedure and/or the dire living conditions (Dupont et al., 2005; Van Dijk et al., 2001). These studies show how the long interval of uncertainty affects mental health, as it creates fear, feelings of insecurity and the sense of total dependency. Uribe Guajardo et al. (2016) concluded that refugees in Australia with longer waits for resettlement were more distressed than those with a shorter waiting period.

Van Dijk et al. (2001) argue that placing asylum seekers in secluded areas leads to feelings of pain, sorrow, stress, grief and loss. In spite of all this, the respondents in our study reported being satisfied with the conditions they were offered. This may be due to their religiosity/spirituality having a moderative effect (Shannon et al., 2013).

Some researchers have reported that religiosity/spirituality enhances *physical well-being* and better quality of life (Matthews et al., 1998; Mueller et al., 2001). This is in contrast to our findings, which indicate that religiosity/spirituality is not correlated with physical quality of life. As physical quality of life is significantly correlated with illness and/or advanced age, this may be related to the participants in this study being predominantly young and physically fit. The benefits of religion on subjective health seem to be greatest for those suffering from physical health problems (Meints et al., 2018). Koenig (2001) and Seeman et al. (2003) found physical benefits from religiosity, as it is associated with better lipid profiles, lower blood pressure, better immune function and decreased levels of cortisol.

Level of independence, which means: mobility, activities of daily living, dependence on medication or treatment and work capacity, was also positively correlated with religiosity/spirituality. Teodorescu et al. (2012) found that post-migration stressors, such as unemployment, a weak social network and poor social integration, were moderately negatively correlated with quality of life. Our result may be limited given that our respondents are still living in asylum centres and have no experience of integration challenges and independent life yet.

Our participants had been exposed to both pre- and post-migration traumas and stressors (Abraham et al., 2018). Several authors point out that the combination of these factors have a direct influence on quality of life (Carlsson et al., 2006; Hermansson et al., 2002; Priebe et al., 2009). Despite the traumas they experienced during migration and the challenges they encountered in the asylum centres, our participants reported that their religion helped them endure and retain hope for the future, they established proxy families or 'borrowing networks' for fellowship and social, material and emotional support, and they tried to look to the future instead of dwelling on the past (Abraham et al., 2018). In line with prior studies (Bai & Lazenby, 2015; Panzini et al., 2017), our results indicate that female Eritrean refugees' overall *quality of life* is strongly correlated with religiosity/spirituality.

Strength and limitations

The first author is a female, bilingual psychiatrist familiar with the socio-cultural contexts and languages of both Eritrea and Norway. Given that all the interviewees in this study spoke Tigrinya, the most common language in Eritrea, the ethnic and gender match between the researcher and the participants is one of this study's strengths. This helps to avoid the distance between interviewer and informer that may make it more difficult to build trust and ensure that the information going back and forth is fully understood.

Additional strength is focusing on refugees from just one country and one gender, Eritrean women, whereas other studies tend to include refugees from different countries of origin and of both genders Heterogeneity with regards to gender, religion, ethnicity and different kinds of traumaexposure may impact the results (Steel et al., 2009).

The study's small sample size limits its generalizability.

In this quantitative part of the study, the questionnaire offered only the options of an economic or political reason for fleeing Eritrea. However, in the qualitative part of the study (Abraham et al., 2018), the respondents answers were more nuanced and the data showed, for instance, the difficulty to discriminate economic and political reasons, as their economic problems were the consequence of the political situation in the country. The traditional dichotomies separating forced and voluntary migration, and the economic and political motives for migration, have been challenged (Zolberg, 1989).

As this study was conducted among women still living in asylum reception centres and thus had not yet experienced independent life in a Norwegian municipality, we cannot say whether their present religiosity/spirituality will continue into their resettlement. Including only women with refugee status was an important ethical decision, in order to avoid women whose cases were still being processed and who might volunteer to participate in the belief that doing so would strengthen their case. As a result, we do not know how individuals who had not yet been granted asylum would have answered, as they might have differed in their religiosity/spirituality and quality of life. An additional limitation is that the respondents were 'healthy' women and we probably did not include those with no capacity (physical or psychological) to participate. Despite these limitations to the generalizability of the findings, this sample is likely to be, representative of recently-arrived female Eritrean refugees in Norway and possibly other parts of Western Europe as well.

The main aim of the study is to explore the relation between religiosity/spirituality and quality of life. The WHOQOL-SRPB questionnaire might however, not capture the full role of religiosity/spirituality as there might be other factors that are not measured by SRPB that are equally or more important for quality of life. On the other hand, the WHOQOL-SRPB questionnaire measures, besides of religiosity/five other aspects of quality of life, which are especially relevant to our study population. Therefore, we considered the WHOQOL-SRPB questionnaire as appropriate tool for our study.

Conclusion

The findings presented in this paper contribute to the development of a more thorough understanding of the relation of religiosity, spirituality, and personal beliefs and different aspects of quality of life in trauma survivors.

We recommend a longitudinal follow-up study of similar populations, after they are resettled and integrated into their host countries, to understand the associations between quality of life and religiosity/spirituality over time.

The result of this study will also be reported to and discussed with the Eritrean religious communities and the Eritrean Women's Association in Norway, which can use the findings to assist female Eritrean refugees in the co-ethnic peer support network, as we believe that it will reinforce their resilience, which is useful for the integration process.

Funding

The author(s) received no financial support for the research, authorship and/or publication of this article.

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References

Abraham, R., Lien, L., & Hanssen, I. (2018). Coping, resilience and posttraumatic growth among Eritrean female refugees living in Norwegian asylum reception centres: A qualitative study. *International Journal of Social Psychiatry*, *64*(4), 359–366. https://doi.org/10.1177/0020764018765237

Agger, I., Igreja, V., Kiehle, R., & Polatin, P. (2012). Testimony ceremonies in Asia: Integrating spirituality in testimonial therapy for torture survivors in India, Sri Lanka, Cambodia, and the Philippines. *Transcultural Psychiatry*, *49*(3–4), 568–589. https://doi.org/10.1177/1363461512447138

Bai, M., & Lazenby, M. (2015). A systematic review of associations between spiritual well-being and quality of life at the scale and factor levels in studies among patients with cancer. *Journal of Palliative Medicine*, *18*(3), 286–298. https://doi.org/10.1089/jpm.2014.0189

Bailliet, C. (2007). Examining sexual violence in the military within the context of Eritrean asylum claims presented in Norway. *International Journal of Refugee Law*, *19*(3), 471–510.

Baird, M. (2012). Well-being in refugee women experiencing cultural transition. *Advances in Nursing Science*, *35*(3), 249–263.

Banzhaf, E., de la Barrera, F., Kindler, A., Reyes-Paeckec, S., Schlinka, U., Welz, J., & Kabischa, S. (2014). A conceptual framework for integrated analysis of environmental quality and quality of life. *Ecological Indicators*, *45*, 664–668. https://doi.org/10.1016/j.ecolind.2014.06.002

Bhugra, D., & Ruiz, P. (2011). Editorial. Mental health services research: Challenges and contexts. *International Review of Psychiatry*, *23*(1), 1. https://doi.org/10.3109/09540261.2011.546075

Carlson, B. E., Cacciatore, J., & Klimek, B. (2012). A risk and resilience perspective on unaccompanied refugee minors. *Social Work*, *57*(3), 259–269. https://doi.org/10.1093/sw/sws003

Carlsson, J. M., Olsen, D. R., Mortensen, E. L., & Kastrup, M. (2006). Mental health and health-related quality of life: A 10-year follow-up of tortured refugees. *Journal of Nervous & Mental Disease*, *194*(10), 725–731. https://doi.org/10.1097/01.nmd.0000243079.52138.b7

Chaaya, M., Sibai, A. M., Fayad, R., & El-Roueiheb, Z. (2007). Religiosity and depression in older people: Evidence from underprivileged refugee and non-refugee communities in Lebanon. *Aging & Mental Health*, *11*(1), 37–44. https://doi.org/10.1080/13607860600735812

Dupont, H., Kaplan, C. D., Verbraeck, H. T., Braam, R. V., & van de Wijngaart, G. F. (2005). Killing time: Drug and alcohol problems among asylum seekers in the Netherlands. *International Journal of Drug Policy*, *16*(1), 27–36.

Eriksson, M. (2016). The sense of coherence in the salutogenic model of health. In M. B. Mittelmark, S. Sagy, M. Eriksson, G. F. Bauer, J. M. Pelikan, B. Lindstrom & G. A. Espnes (Eds.), *The handbook of salutogenesis* (pp. 91–96). Springer e-book.

Falsetti, S. A., Resick, P. A., & Davis, J. L. (2003). Changes in religious beliefs following trauma. *Journal of Traumatic Stress*, *16*(4), 391–398. https://doi.org/10.1023/A:1024422220163

Gostečnik, C., Repič Slavič, T., Lukek, S., & Cvetek, R. (2014). Trauma and religiousness. *Journal of Religion and Health*, *53*(3), 690–701. https://doi.org/10.1007/s10943-012-9665-y

Gozdziak, E., & Long, K. C. (2005). *Suffering and resiliency of refugee women: An annotated bibliography 1980-2005*. Georgetown University, Institute for the Study of International Migration (ISIM).

Hackney, C., & Sanders, G. S. (2003). Religiosity and mental health: A meta-analysis of recent studies. *Journal for the Scientific Study of Religion*, *42*(1), 43–55.

Hepner, T. (2003). Religion, nationalism, and transnational civil society in the Eritrean diaspora. *Global Studies in Culture and Power*, *10*(3), 269–293. https://doi.org/10.1080/10702890390228874

Hermansson, A. C., Timpka, T., & Thyberg, M. (2002). The mental health of war-wounded refugees: An 8-year follow-up. *The Journal of Nervous and Mental Disease*, *190*(6), 374–380. https://doi.org/10.1097/00005053-200206000-00005

Ismail, Z., & Deshmukh, S. (2012). Religiosity and psychological wellbeing. *International Journal of Business and Social Science*, *3*(11), 20–28.

Israel-Cohen, Y., Kaplan, O., Noy, S., & Kashy-Rosenbaum, G. (2016). Religiosity as a moderator of self-efficacy and

social support in predicting traumatic stress among combat soldiers. *Journal of Religion and Health*, *55*(4), 1160–1171. https://doi.org/10.1007/s10943-016-0187-x

Jim, H. S., Pustejovsky, J. E., Park, C. L., Danhauer, S. C., Sherman, A. C., Fitchett, G., Merluzzi, T. V., Munoz, A. R., George, L., Snyder, M. A., & Salsman, J. M. (2015). Religion, spirituality, and physical health in cancer patients: A meta-analysis. *Cancer*, *121*(21), 3760–3768. https://doi.org/10.1002/cncr.29353

Jones, J. M., St Peter, J. R., Fernandes, S. J., Herrenkohl, T. I., Kosterman, R., & Hawkins, J. D. (2011). Ethnic and gender variation in religious involvement: Patterns of expression in young adulthood. *Review of Religious Research*, *53*(2), 207–225. https://doi.org/10.1007/s13644-011-0006-5

Kalra, G., Christodoulou, G., Jenkins, R., Tsipas, V., Christodoulou, N., Lecic-Tosevski, D., Mezzich, J., Bhugra, D., & Association, E. P. (2012). Mental health promotion: Guidance and strategies. *European Psychiatry*, *27*(2), 81–86. https://doi.org/10.1016/j.eurpsy.2011.10.001

Koenig, H. G. (2001). Religion and medicine IV: Religion, physical health, and clinical implications. *International Journal of Psychiatry in Medicine*, *31*(3), 321–336. https://doi.org/10.2190/X28K-GDAY-75QV-G69N

Krause, N. (2012). Feelings of gratitude toward god among older whites, older African Americans, and older Mexican Americans. *Research on Aging*, *34*(2), 156–173. https://doi.org/10.1177/0164027511417884

Marciano, H., Kimhi, S., & Eshel, Y. (2019). Predictors of individual, community and national resiliencies of Israeli Jews and Arabs. *International Journal of Psychology*, *55*(4), 553–561. https://doi.org/10.1002/ijop.12636

Maselko, J., & Kubzansky, L. D. (2006). Gender differences in religious practices, spiritual experiences and health: Results from the US General Social Survey. *Social Science & Medicine*, *62*(11), 2848–2860. https://doi.org/10.1016/j.socscimed.2005.11.008

Matthews, D. A., McCullough, M. E., Larson, D. B., Koenig, H. G., Swyers, J. P., & Milano, M. G. (1998). Religious commitment and health status: A review of the research and implications for family medicine. *Archives of Family Medicine*, *7*(2), 118–124. https://doi.org/10.1001/archfami.7.2.118

Meints, S. M., Mosher, C., Rand, K. L., Ashburn-Nardo, L., & Hirsh, A. T. (2018). An experimental investigation of the relationships among race, prayer, and pain. *Scandinavian Journal of Pain*, *18*(3), 545–553. https://doi.org/10.1515/sjpain-2018-0040

Meyers, J. L., Brown, Q., Grant, B. F., & Hasin, D. (2017). Religiosity, race/ethnicity, and alcohol use behaviors in the United States. *Psychological Medicine*, *47*(1), 103–114. https://doi.org/10.1017/S0033291716001975

Mueller, P. S., Plevak, D. J., & Rummans, T. A. (2001). Religious involvement, spirituality, and medicine: Implications for clinical practice. *Mayo Clinic Proceedings*, *76*(12), 1225–1235. https://doi.org/10.4065/76.12.1225

Nordanger, D. (2007). Coping with loss and bereavement in post-war Tigray, Ethiopia. *Transcultural Psychiatry*, *44*(4), 545–565. https://doi.org/10.1177/1363461507083896

Pandya, S. P. (2018). Spirituality for mental health and well-being of adult refugees in Europe. *Journal of Immigrant and Minority Health*, *20*(6), 1396–1403. https://doi.org/10.1007/s10903-018-0717-6

Panzini, R. G., Mosqueiro, B. P., Zimpel, R. R., Bandeira, D. R., Rocha, N. S., & Fleck, M. P. (2017). Quality-of-life and spirituality. *International Review of Psychiatry*, *29*(3), 263–282. https://doi.org/10.1080/09540261.2017.1285553

Park, C. L., Smith, P. H., Lee, S. Y., Mazure, C. M., McKee, S. A., & Hoff, R. (2017). Positive and negative religious/spiritual coping and combat exposure as predictors of posttraumatic stress and perceived growth in Iraq and Afghanistan veterans. *Psychology of Religion and Spirituality*, *9*(1), 13–20. https://doi.org/10.1037/rel0000086

Peres, M. F. P., Kamei, H. H., Tobo, P. R., & Lucchetti, G. (2018). Mechanisms behind religiosity and spirituality's effect on mental health, quality of life and well-being. *Journal of Religion and Health*, *57*(5), 1842–1855. https://doi.org/10.1007/s10943-017-0400-6

Pescosolido, B. A., & Georgianna, S. (1989). Durkheim, suicide, and religion: Toward a network theory of suicide. *American Sociological Review*, *54*(1), 33–48.

Posselt, M., Eaton, H., Ferguson, M., Keegan, D., & Procter, N. (2019). Enablers of psychological well-being for refugees and asylum seekers living in transitional countries: A systematic review. *Health & Social Care in the Community*, *27*(4), 808–823. https://doi.org/10.1111/hsc.12680

Priebe, S., Matanov, A., Janković Gavrilović, J., McCrone, P., Ljubotina, D., Knezević, G., Kucukalić, A., Franciskovic, T., & Schützwohl, M. (2009). Consequences of untreated posttraumatic stress disorder following war in former Yugoslavia: Morbidity, subjective quality of life, and care costs. *Croatian Medical Journal*, *50*(5), 465–475. https://doi.org/10.3325/cmj.2009.50.465

Schaefer, L. M., Howell, K. H., Schwartz, L. E., Bottomley, J. S., & Crossnine, C. B. (2018). A concurrent examination of protective factors associated with resilience and posttraumatic growth following childhood victimization. *Child Abuse & Neglect*, *85*, 17–27. https://doi.org/10.1016/j.chiabu.2018.08.019

Seeman, T. E., Dubin, L. F., & Seeman, M. (2003). Religiosity/spirituality and health: A critical review of the evidence for biological pathways. *American Psychologist*, *58*(1), 53–63.

Shahabi, L., Powell, L. H., Musick, M. A., Pargament, K. I., Thoresen, C. E., Williams, D., Underwood, L., & Ory, M. A. (2002). Correlates of self-perceptions of spirituality in American adults. *Annals of Behavioral Medicine*, *24*(1), 59–68. https://doi.org/10.1207/S15324796ABM2401_07

Shakespeare-Finch, J., & Wickman, K. (2010). Adaptation of Sudanese refugees in an Australian context: Investigating helps and hindrances. *Journal of International Migration*, *48*(1), 23–46. https://doi.org/org/10.1111/j.1468-2435.2009.00561.x

Shannon, D. K., Oakes, K. E., Scheers, N. J., Richardson, F. J., & Stills, A. B. (2013). Religious beliefs as moderator of exposure to violence in African American adolescents. *Psychology of Religion and* Spirituality, *5*(3), 172.

Simmelink, J., Lightfoot, E., Dube, A., Blevins, J., & Lum, T. (2013). Understanding the health beliefs and practices of East African refugees. *American Journal of Health Behavior*, *37*(2), 155–161. https://doi.org/10.5993/AJHB.37.2.2

Steel, Z., Chey, T., Silove, D., Marnane, C., Bryant, R. A., & van Ommeren, M. (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. https://doi.org/10.1001/jama.2009.1132

Ten Kate, J., de Koster, W., & van der Waal, J. (2017). The effect of religiosity on life satisfaction in a secularized context: Assessing the relevance of believing and belonging. *Review of Religious Research*, *59*(2), 135–155. https://doi.org/10.1007/s13644-016-0282-1

Teodorescu, D. S., Siqveland, J., Heir, T., Hauff, E., Wentzel-Larsen, T., & Lien, L. (2012). Posttraumatic growth, depressive symptoms, posttraumatic stress symptoms, post-migration stressors and quality of life in multi-traumatized psychiatric outpatients with a refugee background in Norway. *Health and Quality of Life Outcomes*, *10*, 84. https://doi.org/10.1186/1477-7525-10-84

Thapa, S. B., & Hauff, E. (2005). Gender differences in factors associated with psychological distress among immigrants from low- and middle-income countries: Findings from the Oslo Health Study. *Social Psychiatry and Psychiatric Epidemiology*, *40*(1), 78–84. https://doi.org/10.1007/s00127-005-0855-8

Tingvold, L., Hauff, E., Allen, J., & Middelthon, A. L. (2012). Seeking balance between the past and the present: Vietnamese refugee parenting practices and adolescent well-being. *International Journal of Intercultural Relations*, *36*(4), 563–574. https://doi.org/10.1016/j.ijintrel.2012.03.004

UDI. (2018). *Asylum applications lodged in Norway by citizenship and Month (2018). January - December 2018*. https:www.udi.no/en/statistics-and-analysis/statistics/asylum-applications-lodged-in-norway-by-citizens

UNHCR. (2006). *The state of the world's refugees 2006 – Human displacement in the new millennium. Chapter 3: Addressing refugee security*.

Uribe Guajardo, M. G., Slewa-Younan, S., Smith, M., Eagar, S., & Stone, G. (2016). Psychological distress is influenced by length of stay in resettled Iraqi refugees in Australia. *International Journal of Mental Health Systems*, *10*, 4. https://doi.org/10.1186/s13033-016-0036-z

VanderWeele, T. J. (2017). Religious communities and human flourishing. *Current Directions in Psychological Science*, *26*(5), 476–481. https://doi.org/10.1177/0963721417721526

Van Dijk, R., Bala, J., Öry, F., & Kramer, S. (2001). Now we have lost everything: Asylum seekers in the Netherlands and their experiences with health care. *Medische Antropologie*, *2*, 284–300.

Velayati, A. A., Bakayev, V., Bahadori, M., Tabatabaei, S. J., Alaei, A., Farahbood, A., & Masjedi, M. R. (2007). Religious and cultural traits in HIV/AIDS epidemics in sub-Saharan Africa. *Archives of Iranian Medicine*, *10*(4), 486–497. https://doi.org/07104/AIM.0012

WHO (World Health Organisation). (2002). *WHOQOL-SRPB field-test instrument: WHOQOL spirituality, religiousness and personal beliefs (SRPB) field-test instrument: The WHOQOL-100 questions plus 32 SRPB questions* (2012 revision ed.). World Health Organization. https://apps.who.int/iris/handle/10665/77777

Winter, U., Hauri, D., Huber, S., Jenewein, J., Schnyder, U., & Kraemer, B. (2009). The psychological outcome of religious coping with stressful life events in a Swiss sample of church attendees. *Psychotherapy and Psychosomatics*, *78*(4), 240–244. https://doi.org/10.1159/000219523

World Population Review. (2019). *Eritrea population 2019 (demographics, maps, graphs)*. Retrieved December 3, 2019, from http://worldpopulationreview.com/countries/eritrea-population/

Zolberg, A. R. (1989). The next waves: Migration theory for a changing world. *International Migration Review*, *23*(3), 403–430.

Zukerman, G., & Korn, L. (2014). Post-traumatic stress and world assumptions: The effects of religious coping. *Journal of Religion and Health*, *53*(6), 1676–1690. https://doi.org/10.1007/s10943-013-9755-5