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### Résumé de l'article

Cette étude examine la relation entre la religiosité et le sentiment d'avoir un but dans la vie chez les jeunes réfugiés musulmans (n = 222; âge moyen = 20,18 ans) en Allemagne, un sujet peu exploré jusqu'à présent. Conformément aux recherches précédentes, les personnes interrogées avaient un sentiment modéré mais positif d'avoir un but dans la vie, qui était favorisé par la religiosité. L'analyse de régression a montré que même après avoir tenu compte de la santé physique et du soutien social, la religiosité restait un facteur prédictif important du sentiment d'avoir un but dans la vie, l'ampleur de son effet ne différant pas de manière significative des deux autres variables du modèle. Les résultats soulignent l'importance de la religiosité et du soutien social pour le bien-être des jeunes réfugiés musulmans.





# Religion as a Resource? The Impact of Religiosity on the Sense of Purpose in Life of Young Muslim Refugees in Germany

Daniel Engel<sup>a</sup> , Marcus Penthin<sup>b</sup> , Manfred L. Pirner<sup>b</sup>  and Ulrich Riegel<sup>a</sup> 

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## ABSTRACT

This study examines the relationship between religiosity and purpose in life among young Muslim refugees (n = 222; M<sub>age</sub> = 20.18 years) in Germany, a topic little explored to date. Consistent with previous research, respondents felt a moderate but positive sense of purpose in life, which was fostered by religiosity. Regression analysis demonstrated that even after controlling for physical health and social support, religiosity remained a substantial predictor of purpose in life; its effect size did not differ significantly from the other two variables in the model. The findings emphasize the importance of religiosity and social support for young Muslim refugees' well-being.

## KEYWORDS

adolescents; refugees; immigration; religiosity; Islam, meaning of life; purpose in life

## RÉSUMÉ

Cette étude examine la relation entre la religiosité et le sentiment d'avoir un but dans la vie chez les jeunes réfugiés musulmans (n = 222; âge moyen = 20,18 ans) en Allemagne, un sujet peu exploré jusqu'à présent. Conformément aux recherches précédentes, les personnes interrogées avaient un sentiment modéré mais positif d'avoir un but dans la vie, qui était favorisé par la religiosité. L'analyse de régression a montré que même après avoir tenu compte de la santé physique et du soutien social, la religiosité restait un facteur prédictif important du sentiment d'avoir un but dans la vie, l'ampleur de son effet ne différant pas de manière significative des deux autres variables du modèle. Les résultats soulignent l'importance de la religiosité et du soutien social pour le bien-être des jeunes réfugiés musulmans.

## INTRODUCTION

In 2022, more than 244,000 people applied for asylum in Germany. Normally, opportunities to participate in public life are limited as refugees are not allowed to work at all in the first 3 months of their stay in Germany, and

after this period, access to the labor market is very restricted. In addition, refugees are initially housed in reception facilities after arriving in Germany. Accommodation there is possible for a maximum of 18 months; families with children can leave the initial reception facility after 6 months. Refugees are not

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free to choose their place of residence. The allocation of the place of residence takes place via the so-called Königssteiner Schlüssel, a distribution mechanism by which refugees are initially allocated to individual federal states and then, within the federal states, to particular municipalities. For 3 months, the refugees are subject to the so-called Residenzpflicht (obligation to reside in a particular place), which means that they are not allowed to leave the area prescribed by the authorities ([Bundesministerium der Justiz, 2004](#), s. 12). After that, refugees can move to shared or private accommodation. Young refugees often attend separate lessons in school and thus rarely have contact with German young people. As a result, many refugees show what is called "agency in waiting" ([Murphy et al., 2019](#)). In the host society, refugees often have to develop a new purpose in life.

Germany is a country that was very much shaped by Protestant and Catholic Christianity; but it has also become a secular country, with the constitutional separation of state and religion as well as a substantial proportion of inhabitants not having any religious affiliation or belief. Thus, refugees' coping with life takes place in a societal context in which many people are skeptical about the religiosity of refugees because, as several studies have shown ([Brettfeld & Wetzels, 2003, 2007](#); [Haug et al., 2009](#); [Ohlendorf et al., 2015](#), p. 4), their religiosity is considerably higher than that of the average German, and in the case of Muslim religiosity, it also differs from Germany's traditionally Christian culture.

According to [Siegert \(2020\)](#), the vast majority of refugees who come to Germany (70.7%) are Muslim, divided into 82.7% Sunni and 9.8% Shiite. An additional 7.5% are affiliated to other Muslim denominations: 16.8% of refugees are affiliated with a Christian

denomination, divided into 42% Orthodox, 32.6% Protestant, and 19.4% Catholic. An additional 6.0% are affiliated with other Christian denominations. While 6.2% of refugees are not affiliated with any religion, 6.3% belong to other religions ([Siegert, 2020](#), pp. 3–4). In comparison, most of Germany's population is Christian, divided into 27.1% Catholic, 24.9% Protestant, 2.2% Protestant free churches, and 2.4% Orthodox. The proportion of Muslims is estimated to be between 6.4% and 6.7%. However, nonreligious or nondenominational individuals make up the largest group within the German population, amounting to about 35% ([Müller & Pollack, 2022](#)).

[Baumann and Nagel \(2023\)](#) point out that in recent decades, an increasing "religionizing" of cultural differences in the context of migration and integration has taken place. In this public discourse, it seems the religiosity of refugees is both over- and underestimated. As a fearmongering token of religious (especially Muslim) extremism, it is overestimated in its effects of religious radicalization, whereas the potential of religion as a resource for coping with crises and for social inclusion and integration is underestimated and has only recently become more closely examined in academic discourse and research ([Baumann, 2014](#); [Gärtner & Hennig, 2017](#); [Pirner, 2017](#); [Pirner & Bradtke, 2021](#); [Siegert, 2020](#); [Traunmüller, 2008](#)).

To contribute to a more objective debate, this paper analyzes the role of religiosity for young refugees'<sup>1</sup> sense of purpose in life. As mentioned, addressing the question of one's purpose in life is a major challenge while waiting for permission to live in Ger-

<sup>1</sup>Related to the empirical basis of the study, the term *refugee* reflects the self-identification of the participants, not the legal category. Refugee status is declarative and recognized retrospectively after examination by government authorities ([UNHCR, 2019](#), p. 17). However, during the survey, the process of being granted refugee status had not yet been completed by all participants.

many; it is also an ongoing task in refugees' efforts to establish self-determined lives and integrate into German society. Religion may be a powerful resource in meaning-making processes, particularly in times of disaster and difficult situations (Park, 2016). However, the abovementioned differences between most refugees' religiosity and that of their host country's societal majority may hamper the potentially positive effects of religion since perceived differences, the status of being a religious minority, skepticism towards faith traditions, and downright discrimination because of them can be obstacles for refugees in living their religion to the desired extent and may cause them additional stress (Pickel & Pickel, 2019).

Considering the special situation of Muslim refugees as the biggest group of protection-seeking immigrants in a mainly Christian as well as secular German society, the main research question of this paper is as follows: Given these rather unfavourable contextual circumstances, what is the extent to which the religiosity of young Muslim refugees nevertheless contributes positively to their sense of purpose in life?

## THEORETICAL CONCEPTS, STATE OF RESEARCH, AND RESEARCH QUESTION

### Purpose in Life and Its Correlates

In scholarly debate, purpose in life has long been discussed as a cornerstone of well-being and as a central human motivation (King et al., 2016; Sumner et al., 2018). In this discourse, **purpose in life** refers to the extent to which individuals have a sense of meaning, direction, and intention in their lives (Ryff, 1989, p. 1071). This sense of purpose is often described as a fundamental goal or aim that guides behaviour and provides a sense of fulfillment and satisfaction. Besides being

used as a single measure, this concept is often part of a more complex theoretical framework. For Ryff (1989), purpose in life is one aspect of well-being besides autonomy, environmental mastery, positive relations with others, personal growth, and self-acceptance. Böhnisch (2016) described purpose in life as the psychodynamic dimension of his concept of "Lebensbewältigung" (coping with life), complemented by the quality of social relations (socio-dynamic-interactive dimension), as well as economic and socio-structural resources for dealing with challenging life situations (socio-structural dimension). These more complex concepts point to the fact that purpose in life is embedded in a relational web of correlates and that these correlates are of both psychological and sociological character. To elaborate and maintain purpose in life is not just a question of inner mental processes but also an issue of social embeddedness. This theoretical notion is supported by empirical evidence in the case of refugees, since sense of coherence and perceived social support moderate between acculturative stress and positive functioning (Berry et al., 1987; Finch & Vega, 2003; Jibeen, 2011).

In addition to psychological and sociological dimensions, empirical evidence indicates that physical health is also correlated to purpose in life (Kim et al., 2017; Teas et al., 2022; Yemiscigil & Vlaev, 2021). Obviously, many refugees are affected by the conditions they lived in before and during their flight, and their precarious situation in the new host country may also impair their physical health. In Germany, however, refugees do not always receive appropriate medical care (Tinnemann et al., 2016). Additionally, refugees are often not aware of their rights and opportunities regarding public health care (Kotovicz et al., 2018). As a result, the

physical dimension might be of relevance in the refugees' struggle for purpose in life.

In summary, purpose in life can be said to represent an individual's sense of meaning and direction in life, and this longing for meaning is conditioned by physical, psychological, and social aspects. In the case of refugees' sense of purpose in life, all three dimensions are of particular interest since many refugees struggle with both physical and mental health and often have problems with becoming familiar with their host societies' various services, social communities, and cultures.

### Religiosity as Source of Purpose in Life

Religion can be a supportive resource in coping with both traumatic experiences and social isolation. On one hand, religion may be part of an individual's meaning-making system (Park, 2010), and empirical evidence points to religious coping as positively correlated with mental health (Hill & Pargament, 2003). Particularly in times of crisis, religion is often referred to as central in managing processes of meaning-making and readjusting one's purpose in life (Park, 2016). Religion's positive effect on purpose in life can be found in both individualized spirituality (Kim & Esquivel, 2011) and institutionalized religious practice (Greenfield et al., 2009). In addition, religious communities are social spaces in which individuals might experience social coherence and integration. Since around 2000, there has been international sociological discourse on religion as a "social resource" or "social capital" (Bunn & Wood, 2012; Fiddian-Qasimiyeh & Qasimiyeh, 2010; Putnam & Campbell, 2010; Traunmüller, 2009). Findings essentially point to the relevance of religious communities in offering bonding as well as bridging capital. For example, there is solid empirical evidence

that in Germany, being a member of a religious community results in increased trust in other people (Baumann, 2014; Ohlendorf et al., 2015; Traunmüller, 2008).

Empirical studies investigating purpose in life often refer to religiosity as a variable representing religion (Aghababaei & Błachnio, 2014; Francis, 2013; Hayward & Krause, 2013). Religiosity is usually understood as "the individual, subjective side of the religious—in contrast to 'religion' as an objectively given" (Bochinger, 2004, p. 413). Accordingly, religiosity is related to religions as cultural entities, but also to the anthropologically grounded openness of humans to "ultimate questions," "ultimate horizons," "meaning-making," and "transcendence," and it always implies subjective decisions and perspectives (Pirner, 2006). As relevant meta-analyses have shown (Johnson et al., 2004; Kapuscinski & Masters, 2010), the operationalization of religiosity in quantitative as well as qualitative studies is inconsistent, yet multidimensional concepts of religiosity have found increasing approval (Baumann & Nagel, 2023, p. 25; Huber, 2003). Despite different concepts of religiosity, it was found to be positively related to meaning or purpose in life (Chan et al., 2019; Park, 2005; Prieto-Ursúa & Jódar, 2020; Reynolds et al., 2022).

### Religiosity and Purpose in Life Among Refugees

Flight and forced migration can be defined as special cases of biographical crises, and confrontation with a new cultural context in a host country may have additional unsettling effects. In these situations, religion can be expected to gain increasing importance as a potential resource for positive coping or as a perceived support. Such theoretical considerations are supported by empirical evidence. Regarding refugees, several recent

studies in various national and regional contexts show a positive effect of religiosity on mental health and purpose in life (Abraham et al., 2022; Eghdamian, 2016; Hasan et al., 2018; Lusk et al., 2021; Ní Raghallaigh, 2011; Skalisky et al., 2022; Taufik & Ibrahim, 2020). In the German context, however, there have been only a few, mostly qualitative empirical studies on the importance of the religiosity of refugees for coping (Alhaddad et al., 2023; Pirner, 2017; Pirner & Bradtke, 2021). While, as mentioned, many studies show that immigrants to Germany are characterized by a considerably higher degree of religiosity than the native majority population (Brettfeld & Wetzels, 2003, 2007; Haug et al., 2009; Ohlendorf et al., 2015, p. 4), Siegert (2020) stated that Muslim refugees seem to be a little less religious than other Muslims in Germany. Also, refugees' religiosity appears to be expressed more privately than in their countries of origin (Deutscher Bundestag, 2017, p. 213; Nagel, 2022; Pirner, 2017; Pirner & Bradtke, 2021; Siegert, 2020). Refugees use their religiosity as a resource for coping with the challenges of migration and integration (Müssig & Stichs, 2012; Rohde-Abuba & Konz, 2020), but they do so in a mainly nonreligious or anti-religious cultural context. Based on the quantitative analysis of data from the representative Institut für Arbeitsmarkt- und Berufsforschung (IAB)–Bundesamt für Migration und Flüchtlinge (BAMF)–Socio-Economic Panel (SOEP) panel comprising 5,668 refugees who were interviewed in 2017, Siegert (2020, p. 6) found that for 75.4% of the Muslim respondents and 86.3% of the Christian respondents, their religion was "very important" or "important" for their well-being and satisfaction. The few exploratory studies on young refugees in Germany also support the idea that religiosity has a positive effect on purpose in life but indicate that there may be tensions

between the refugees', in particular Muslim refugees', appreciation of religion and the more secular and partly anti-Muslim German context (EL-Awad et al., 2022; Gärtner & Hennig, 2017; Konz & Rohde-Abuba, 2022; Maier et al., 2022; Pirner, 2017; Pirner & Bradtke, 2021; Rayes et al., 2021).

## Research Questions and Assumptions

Theoretical considerations and the state of international empirical research outlined above provide strong indications and partial evidence that refugees' religiosity is relevant for their coping with life in general and for their purpose in life in particular. Although some recent research in Germany has shed illuminating light on these relationships, none of these studies has focused specifically on the relationship between religiosity and purpose in life, and almost all of them have been qualitative with rather small, selective samples. Therefore, this paper aims to bridge a research gap by, using quantitative methods, addressing the question of how the religiosity of young Muslim refugees affects their purpose of life.

We focus on young Muslim refugees because in Germany these adolescents seem to be a particularly vulnerable group when it comes to having purpose in life. On the one hand, purpose in life is a crucial issue, particularly for adolescents, who are at an important stage of development, forming their own personal identities (Dahl et al., 2018, p. 441; García-Alandete et al., 2019, p. 24; Heng et al., 2020, p. 322). On the other hand, marginalized and socially disconnected people particularly struggle with purpose in life (Chan et al., 2019, p. 456). This has also been confirmed for refugees (Aladwan et al., 2021; Ayar & Karasu, 2022; Jahanara, 2015). Furthermore, the development of personal identity is sensitive to cultural background (Markus & Kitayama,

2010). Particularly, young Muslims in Germany face cultural Christianity or secularity that appears to be rather intolerant of Islamic identity patterns—a fact well recognized by Muslim adolescents themselves (Ulfat, 2022). This may considerably impair the potential for their religion to offer them a “primary meaning system” (Park, 2005, p. 711). Therefore, we specify our research questions as follows:

1. How can both the purpose in life and the religiosity of young Muslim refugees be described?
2. Is there a positive relationship between refugees' religiosity and their purpose in life?
3. If this is the case, can we find this relationship for all refugees, regardless of their opinions on religion as a support in life, their life situation (physical health, duration of stay in Germany, housing situation, type of accommodation), and their social resources (social support, institutional support, religious community within easy reach), as well as their particular backgrounds (age, sex, country of origin, protection status, level of education)?

In accordance with previous research, we expected that young Muslim refugees would show a considerable range in attitudes and perceptions of purpose in life, while their religiosity would on average be quite high. We further assumed that religiosity would be positively related with purpose in life. Consequently, we could not assess with certainty whether this effect was strong enough for religiosity to also play an essential role in connection with other coping resources. Most likely, **social support** may prevail in the maintenance of purpose in life because it is a necessary resource for living in a foreign environment. Moreover, we expected an interaction between religiosity and perceived

social support because evidence indicates that through the community dimension of religion, social support is facilitated. Also, physical health, duration of stay, and level of education were expected to foster purpose in life to a considerable extent. The importance and vulnerability of refugees' **physical health** has been outlined above. We expected refugees' **duration of stay** in Germany to weaken the effect of religiosity on purpose in life because positive feelings of meaningfulness may increasingly come from other sources when refugees have become familiar with their new host country (Walther et al., 2020); also, (Muslim) religiosity may be increasingly perceived as socially contested (Nagel, 2022). However, we are aware that research on the question of whether duration of stay has a positive, negative, or no meaningful effect on refugees' well-being has so far yielded inconsistent results (Hajak et al., 2021; Kaltenbach et al., 2018). **Level of education** refers to the cognitive dimension of purpose and meaning in life, which is an important dimension as meaning-making is basically a cognitive process of constructing meaning (O'Connor & Chamberlain, 1996; Reker & Wong, 1988). With respect to institutional support, housing situation, and further background variables, we did not formulate any assumptions.

## METHOD<sup>2</sup>

### Data Collection and Sample

The data in this paper are part of a larger project that examines the relevance of young Muslim refugees' religiosity for coping with life in a longitudinal study, Religion as a Resource and a Risk (ReReRi), funded by the

<sup>2</sup>We report in more detail how we determined our sample size, all data exclusions, all manipulations (<https://osf.io/r dhku>), and all measures relevant for this paper (see supplementary material online: <https://osf.io/znmu5>). This preregistered study (<https://osf.io/8h97t>) is of exploratory character (mainly addressing research assumptions 4.3 and 4.4).

German Research Foundation (DFG). The present data refer to measurement time point 1, which covers the period May to August 2022. As indicated above, the focus on Muslim adolescents and young adults corresponds to the German situation, since in 2021, the year when the study was planned, 74.7% of asylum seekers were Muslims, with 16–25-years-olds representing the highest percentage (19.6%) among all applicants. In the same year, just as in the 2 previous years, applicants' three major countries of origin were Syria (37.0%), Afghanistan (15.7%), and Iraq (10.4%) (BAMF, 2022, pp. 19, 24). Therefore, the ReReRi study focuses on this segment of refugees and asylum seekers in Germany.

The sampling process was conducted in three steps. First, registration offices in the German federal states of North Rhine-Westphalia, Lower Saxony, Hesse, and Bavaria were officially requested to provide specific address data. Second, possible participants (7,521) were contacted via mail, provided with information, and asked to participate in our study. As the legal status of "refugee" is not part of address data in Germany, the participants were asked whether "you have fled your homeland and are seeking protection in Germany." This question enabled us to screen the answers. Those interested were provided more information on the project, via videos in their native language and on the project website, and could register to participate in the study via the response letter or the registration form on the website. Third, the sample was supplemented by local refugee aid associations and organizations as some interviewers had personal contacts through their work as interpreters.

Data collection was carried out via computer-assisted self-interviews, computer-assisted personal interviews, and in rare instances computer-assisted web interviews. Partici-

pants were contacted in person by our trained team of interviewers. In a face-to-face meeting, they could complete the questionnaire themselves or get assistance from an interviewer if they had any problems. The questionnaires were administered in German, English, Arabic, Kurmanji, and Farsi. To enable low-threshold access to the survey, participants had the opportunity to get support in their preferred language from the interviewers.

Our final sample comprised 222 young Muslim refugees (women:  $n = 85$ , men:  $n = 137$ ,  $M_{\text{age}} = 20.18$  years,  $SD = 2.79$ ). The average length of stay in Germany was 5.03 years ( $SD = 2.39$ ), with a range of 3 to 95 months. The countries of origin were Syria = 167, Afghanistan = 30, and Iraq = 25. At the time of the interview, 31 of these persons had been granted permanent or naturalized status, 140 had been granted temporary status, 21 had not yet been granted protection status, and 4 had had their applications for protection rejected.

The sample is not representative, neither by design, as we concentrated on certain German states and regions, nor by the sampling process, as we accepted every positive response to our interview invitation. Also, despite the considerable efforts and diverse methods that we invested in recruiting respondents within our sampling regions, their number remained quite modest, and the response rate was rather low. Nevertheless, in terms of the proportions of the countries the respondents fled from, the sample of this study (Syria: 75%, Afghanistan: 13%, Iraq: 12%) is very similar to the considerably larger Refugees in the German educational system (ReGES) study (Syria: 73%, Afghanistan: 13%, Iraq: 9%) (Will et al., 2021). However, dissimilar to the ReGES sample, our sample consisted predominantly of refugees who had already left shared asylum accommodation.



## Instruments<sup>3</sup>

In the following, the instruments with which the theoretical concepts of the research questions have been operationalized will be described. We start with the dependent variable (purpose in life) and then move to the independent variables on the personal level (religiosity, religion as a support in life, life situation: physical health status, duration of stay, housing situation, staying in private accommodation) as well as on the social level (social as well as institutional support, religious community within easy reach).

### *Purpose in Life*

We used the Purpose in Life Scale for Adolescents (PiL-A; [García-Alandete et al., 2019](#), p. 30) because it is based on the prominent Purpose in Life Test by [Crumbaugh and Maholick \(1964\)](#) and efficiently measures both meaning and purpose with only nine items. Furthermore, the structural validity of this scale has been investigated with adolescents, showing good construct validity, good internal consistency, and adequate concurrent validity. We modelled this scale as a single factor.

### *Religiosity*

Muslim adolescents' religiosity was assessed by the Centrality of Religiosity Scale (CRS; [Huber & Huber, 2012](#)). It was chosen because it measures religiosity, even in its five-item short form, as well as more comprehensive alternative instruments do ([Riegel, 2020](#)) and is available in a version for Muslim respondents.

### *Religion as Support in Life*

We asked the young refugees, "How much has your religion/faith helped you to cope with the new situation in Germany?" They responded on a 5-point Likert-type scale (1 =

not at all; 5 = very much) ([Pirner & Bradtke, 2021](#)).

### *Physical Health Status*

Physical health status was measured with the global item "How would you describe your health status in general?" (response format: 1 = very poor; 5 = very good) ([Jylhä, 2009](#)).

### *Duration of Stay*

We asked respondents to provide the date they came to Germany, which was then used to calculate duration of stay: the period from arrival date until the date of the interview.

### *Housing Situation*

Housing situation was measured via the item "Who do you live with?" ([Will et al., 2021](#)). We created one dichotomous variable from the four response categories: 1 = living with family members or 0 = living with other people or alone. This distinction seemed reasonable, since the family can, on the one hand, provide great social support but, on the other hand, also exert social constraints and control.

### *Type of Accommodation*

Refugees' current arrangements were assessed via a single dichotomous item: 0 = shared accommodation facility or 1 = private accommodation.

### *Social Support*

A scale developed by [Satow \(2012\)](#) and borrowed from the ReGES project ([Will et al., 2021](#)) asked how well the refugees felt supported by people in their social environment (three items, e.g., "When I get under pressure, I have people who help me"; response format: 1 = does not apply at all; 5 = completely applies).

<sup>3</sup>See <https://osf.io/znm5>.

### *Institutional Support*

Adopted from the ReGES project (Will et al., 2021), the scale used intended to determine the perceived institutional support that refugees received at the local level, both group related (“What is your impression: do the refugees get enough help here at the local level?”) and individually (“Do you personally get enough help?”) (two items, response format: 1 = yes; 4 = no, reversed).

### *Opportunity to Visit a Religious Community*

Respondents were asked to respond to the following dichotomous item: “There is a religious community within easy reach that suits me (e.g., a church congregation, mosque congregation or similar).”

### *Control Variables*

Control variables included age (coding 1–10; 1 = 16 years; 10 = 25+ years), sex (0 = male; 1 = female), country of origin (Syria, Afghanistan, Iraq), protection status (permanent/naturalized, temporary, protection status pending, protection rejected), whether or not school was attended (school attendance), and if so, which type of school (secondary general school, vocational school, gymnasium/high school), which can be seen as an indicator of level of education. Non-metric control variables were formatted dichotomously.

### **Data Analysis<sup>4</sup>**

All analyses were performed with R (version 4.2.0) using the package “lavaan” (v. 0.6.17; Rosseel, 2012). We applied maximum likelihood estimation with robust standard errors (see Brown, 2015, p. 346) for all latent analyses to correct for deviation from normal distribution of some nondichotomous vari-

ables (skewness range: –4.00, 0.07; excessive kurtosis range: –1.99, –17.21; see Appendix A). Missing values occurred in 58% of cases (with six missing values per variable on average) and were estimated based on the model using full information maximum likelihood.

First, we conducted confirmatory factor analyses to determine construct validity. On average, more than half of the variance in the items was explained by the four factors (average variance extracted, AVE) ( $M_{AVE} = .54$ ), although for purpose in life and religiosity, AVE was less than half. Nevertheless, the constructs were measured with good to very good reliability ( $\omega = \epsilon$  [.72; .86]), suggesting convergent validity (Hair et al., 2014, p. 619). Discriminant validity of the constructs was also ensured.<sup>5</sup>

We then looked at the effects of the bivariate latent correlations of our predictor variables with purpose in life to decide which of these were to be included in the regression models. For this, we used minimum-effect tests (METs) instead of the traditional null hypothesis significance testing, as documented in Lakens et al. (2018), with a predefined smallest effect size of interest of  $r < |.10|$ , since in general the correlations of variables with religiosity were not overly high (Penthin et al., 2023).<sup>6</sup>

## **RESULTS**

To answer the first research question, descriptive statistics were run for the PiL-A, as well as for the CRS-5 (see Appendix C). While the individual purpose in life items ranged from 1 to 11, the purpose in life scale ranged from 1.11 to 11.0, with  $M = 7.81$  ( $SD = 1.76$ ). Despite the overall positive tendency, the rather high SD value indicates that there are considerable differences between individuals. Overall,

<sup>4</sup>A detailed description, including data, scripts, and outputs of the calculations performed, is documented in the supplementary material (<https://osf.io/znm5>).

<sup>5</sup>See Appendix B for information on the construct validity of the scales as well as latent correlations of all variables.

<sup>6</sup>See <https://osf.io/znm5> for further details on METs.

**Table 1***Stepwise Regression Model for Predicting Purpose in Life (PiL-A)*

Concept	Variable	B (SE)	p (B)	$\beta$ (SE)	p ( $\beta$ )
Step 1 ( $R^2 = .07$ )					
Religiosity	CRS	.63 (.24)	< .01	.27 (.09)	< .01
Step 2 ( $R^2 = .12$ )					
Religiosity	CRS	.60 (.24)	.01	.25 (.09)	< .01
Life situation	Physical health status	.42 (.15)	< .01	.22 (.08)	< .01
Step 3 ( $R^2 = .21$ )					
Religiosity	CRS	.41 (.22)	.06	.17 (.09)	< .05
Life situation	Physical health status	.25 (.15)	.10	.13 (.08)	.10
Social resources	Social support	.51 (.18)	< .01	.32 (.09)	< .01

Note.  $N = 222$ . PiL-A = Purpose in Life Scale for Adolescents; CRS = Centrality of Religiosity Scale. Only the variables that showed bivariate correlations for PiL-A with a predefined smallest effect size of interest of  $r < |.10|$  based on minimum-effect tests were included in the regression models (see [Appendix B](#)). See supplementary material (<https://osf.io/znm5>) for model fit.

about 10%–20% of the sample had a rather negative perception of their lives. The CRS had  $M = 3.86$  ( $SD = 0.79$ ). This means that the majority of the sample was religious (about 42%) or highly religious (about 55%), according to the categorization by [Huber & Huber \(2012\)](#).

The second research question focuses on the relationship between the refugees' religiosity and their purpose in life. To examine this relationship, we analyzed the bivariate correlation between the PiL-A and the CRS-5. The two scales correlate with a rather modest effect size (according to [Cohen, 1988](#)) of  $r = .27$  (.09;  $p < .01$  in a MET).

To answer the third research question, we controlled for our participants' opinions on religion as a support in life, their individual life situation (physical health status, duration of stay in Germany, housing situation, type of accommodation), and their social resources (social support, institutional support, religious community within easy reach), as well as background variables (age, sex, country of origin, protection status, level of education) and constructed a stepwise regression model

to predict purpose in life. Using the MET's  $p$  value revealed that apart from religiosity, only 2 of 10 variables (physical health status and social support) showed statistically significant bivariate correlations with purpose in life and were therefore included in the regression models (see [Appendix B](#)). After including physical health status in the model (step 2), the effect of religiosity remained stable, while the life situation of young refugees also had a substantial bivariate effect on purpose in life (see [Table 1](#)). After adding social support in step 3, the effects of the two variables already included shrunk nominally, whereas the effect of social support was substantial. By forming contrasts of the three path coefficients in lavaan in this final model, we found no statistically significant differences between all of the three beta coefficients (see supplementary material: <https://osf.io/znm5>). Therefore, when controlling for physical health status and social support, the effect of religiosity on purpose in life was still substantial and did not differ from that of the other variables. The interaction effect of religiosity

with social support in relation to purpose in life was neither meaningful nor statistically significant from 0 ( $r = .08$  [.15],  $p = .57$ ) and was therefore not included in the model.

## DISCUSSION

In answering our first research question, respondents indicated that they were, on average, satisfied with their lives. The mean value of purpose in life was quite high ( $M = 7.81$ ,  $SD = 1.76$  on an 11-point scale). Nevertheless, studies on purpose in life addressing national natives of the same age cohort indicate even higher means. Studies using the PiL scale had results with means between 5.35 ( $SD = 0.72$ ) (García-Alandete et al., 2018), 5.60 ( $SD = 0.79$ ) (García-Alandete et al., 2013), and 5.61 ( $SD = 0.88$ ) (Soucase et al., 2023). Since these studies applied a 7-point scale, the results correspond to means of 8.49 ( $SD = 1.13$ ), 8.80 ( $SD = 1.24$ ), and 8.82 ( $SD = 1.38$ ) on an 11-point scale. Studies using alternative instruments, such as the Presence of Meaning subscale of the Meaning in Life Questionnaire, end up with means ranging from 4.58 ( $SD = 1.30$ ) (Brassai et al., 2012) and 4.70 ( $SD = 0.46$ ) (Heintzelmann & King, 2014) to 5.68 ( $SD = 1.30$ ) (Jahanara, 2015), which correspond to means of 7.20 ( $SD = 2.04$ ), 7.39 ( $SD = 0.72$ ), and 8.93 ( $SD = 2.04$ ) on an 11-point scale. Considering the problems of comparing empirical results assessed with different measures and response scales and in different social environments, one can conclude that the respondents in our sample tended to experience a slightly lower sense of purpose in life than adolescents and young adults of the same age born in their respective home countries.

Still, the difference in average is rather small when one accounts for all the hardship caused by fleeing from eastern countries to Europe and struggling to gain a foothold in a new environment. However, this small

difference may be partly due to the sampling process. This sample's respondents predominantly lived in apartments (about 55%). They had already managed to leave reception centres, and moving to an apartment signifies being able to establish some sense of home within the new context. Yet, it should not be downplayed that about 20% of the respondents appeared to lack purpose in their lives and to be quite desperate.

As to religiosity, the average of our sample can be described as rather highly religious, although a small minority were nonreligious. This was expected and corresponds to results from other research in the field (see, e.g., Brettfeld & Wetzels, 2007; Ohlendorf et al., 2015, p. 4; Pfündel et al., 2021). However, there are striking differences between the item values of the religiosity scale. While the ideological dimension item "To what extent do you believe that Allah or something divine exists?" resulted in a high mean value of 4.81 ( $SD = 0.65$ ), and the experience dimension item "How often do you experience situations in which you have the feeling that Allah or something divine allows for an intervention in your life?" showed a mean of 4.26 ( $SD = 0.97$ ), the item asking about Friday prayer attendance reached only an average of 2.97 ( $SD = 1.64$ ). One could assume that this rather low mean was caused by the Muslim norm that women do not have to attend Friday prayer in a mosque. This assumption is not corroborated by the data, because there is neither a meaningful nor a statistically significant effect in the mean difference between men and women for this item (Hedges's  $g = .02$ , 90% CI [−.21; .26]; see supplementary material). The lower mean rate on Friday prayer attendance could be due to the fact that at the time of the survey, 96 young refugees ( $M = 2.69$ ,  $SD = 1.60$ ) were working—compared to 113 who were attending school ( $M = 3.19$ ,  $SD = 1.63$ )—and

were therefore potentially restricted from attending Friday prayer (this *M* difference was statistically different from 0: Hedges's  $g = .31$ , 90% CI  $[-.54; -.08]$ ; see supplementary material). The rather low mean value regarding Friday prayer attendance may also, at least partly, be caused by the lack of opportunities to attend a suitable mosque in the respondents' neighbourhood. About half the respondents (55%) indicated that they did not have "a religious community within easy reach that suits" them, whereas there was a positive relationship between Friday prayer attendance with the opportunity to visit a religious community ( $r = .25$  [.07]). These outcomes are in line with previous findings indicating that refugees express their religiosity in a more private manner than they did in their countries of origin (Deutscher Bundestag, 2017, p. 213; Nagel, 2022; Pirner, 2017; Pirner & Bradtke, 2021; Siegert, 2020). From a Western perspective, this means that the religiosity of our respondents was probably higher than the mean value of the CRS indicates. From a Muslim perspective, the interpretation of the finding has further implications. Of course, in this perspective, too, the mean value would most probably be higher if the respondents had the opportunity to attend Friday prayer. But in an orthopractic style of being religious, it is the mere doing that defines one's religiosity (Agilkaya-Sahin, 2020). In such a perspective, the lack of opportunity to attend Friday prayer is a real limitation for one's religiosity.

Regarding our second and third research questions, our analyses showed a positive relationship of religiosity with purpose in life, which confirms our assumption and is consistent with previous research (EL-Awad et al., 2022; Gärtner & Hennig, 2017; Konz & Rohde-Abuba, 2022; Maier et al., 2022; Pirner & Bradtke, 2021; Rayes et al., 2021). Also, the effect of religiosity on purpose in life

remains substantial even when controlling for the respondents' life situation and social resources (see Table 1). Moreover, the effect sizes of the three variables included in the final regression model did not differ significantly, statistically speaking—this indicates the relevance of religiosity despite an initially rather modest correlation between religiosity and purpose in life (it should be noted that in our study the statistical power for the effects sizes found for CRS-5 and Physical health status is below the typical value of .80, for details see supplemental material: <https://osf.io/znm5>). It should be noted that analyzing the relationship between religiosity and purpose in life produces slightly different results compared to the respondents' self-assessment. One item asked, "How much has your religion/faith helped you to cope with the new situation in Germany?" Of the respondents, 76.3% indicated, on a 5-point Likert-type response scale, that it helped them "very much" (32.8%), "rather much" (27.6%), or "moderately" (15.9%). Similarly, Siegert (2020, p. 6) found that for 75.4% of Muslim respondents and for 86.3% of Christian respondents, their religion was "very important" or "important" (on a 4-point Likert-type scale) for their well-being and satisfaction, which seems to be an even more general kind of self-assessment ( $N = 5,668$  refugees of all ages; data collection in 2017). In their subjective self-assessment, respondents appear to have a stronger sense of religion as a resource for their coping with life than can be verified by the more objective CRS-5. Also, differing results may occur due to different analysis methods such as descriptive/bivariate analyses versus regression/multivariate analyses. This also applies to the very few qualitative studies that show relationships between the religiosity and well-being of (Muslim) refugees in Germany

(Alhaddad et al., 2023; Pirner, 2017; Pirner & Bradtke, 2021; Rohde-Abuba & Konz, 2020).

Among the four variables related to the life situation of young refugees, only physical health status had a substantial effect on purpose in life ( $\beta = .13$  [.08]). With regard to this variable, our assumptions were confirmed. Our assumptions regarding the refugees' duration of stay in Germany, which we had expected to weaken the relationship between religiosity and purpose in life, were not confirmed. The bivariate correlation between duration of stay with purpose in life ( $r = -.13$ ) was not meaningful in a MET and not statistically significant from 0 (see supplementary material); therefore, this variable did not enter the regression. There was, if anything, a weak tendency among the respondents who had stayed in Germany longer to show a lower sense of purpose in life compared with those who arrived more recently. Living with the family or not (housing situation) had neither a statistically significant nor a meaningful effect.

Regarding social resources, we expected perceived social support to substantially predict purpose in life, which was confirmed ( $\beta = .32$  [.09]). However, contrary to our assumption, we could not find a meaningful interaction effect of social support with religiosity, although there was a substantial bivariate correlation of these two variables. This indicates that the social support our respondents experienced was not substantially linked to religious communities—at least not with those who were easy to reach and suited the participants' religious beliefs and needs ( $r = -.05$  [.08]; Appendix B)—again contradicting our expectations. Our above mentioned finding, that about half of the respondents indicated they did not have a religious community within easy reach, further supports this interpretation. Perceived institutional support had no meaningful

or statistically significant effect, suggesting that despite all efforts of state bodies, the integration of young refugees is more about social inclusion. This resonates with Alhaddad et al.'s (2023) findings.

Finally, none of our background variables showed a substantial effect on purpose in life. As with duration of stay, there is only a small tendency for young refugees attending high school (gymnasium) to experience a greater purpose in life compared to those who did not attend this type of school (see Appendix B); this effect was not substantial. Therefore, our assumption that purpose in life has a cognitive dimension connected with the intellectual capacities of an individual could not be confirmed. Also, there was some indication that both permanent protection status and having this status rejected was beneficial for purpose in life, whereas a pending status had an adverse effect; however, it is important to keep in mind that in terms of protection status, the distribution of variables is extreme. Therefore, the result is most likely not robust with regard to rejected status since it only applied to four people in our sample.

## CONCLUSION

The aim of this study was to contribute to a better understanding of the role that religiosity plays for young Muslim refugees in coping with life. Theoretical considerations as well as empirical findings led to a focus on their sense of purpose in life, as it seems to constitute a crucial indicator for their general well-being.

Given the controversial debate of the role of (especially Muslim) refugees' religiosity in the host society in Germany, our findings offer relevant evidence about a particular group: young Muslim refugees. In the challenging situation of gaining a foothold in a new environment, we assumed that their religiosity may be a valuable resource for

their sense of purpose in life. According to our findings, compared to Muslim contemporaries born in Germany, the respondents on average felt a modest but positive purpose in life, and religiosity contributed positively to this feeling. This finding fully corresponds to our assumption. Religiosity, physical health, and perceived social support explain the variance in purpose in life to essentially the same extent. These results support previous research in other cultural contexts but go beyond by showing that, in the German context, which is not so favourable to Islam, religiosity still has a substantial effect on Muslim refugees' sense of purpose in life. This resonates with the findings of the few qualitative studies that found positive relationships between refugees' religiosity and their coping with life in Germany (Alhaddad et al., 2023; Pirner, 2017; Pirner & Bradtke, 2021; Rohde-Abuba & Konz, 2020). As these qualitative studies include refugees with other religious affiliations, there is reason to assume that our findings could be replicated among such samples; one may even expect a greater effect of religiosity on purpose in life among non-Muslims, as they are not as confronted with the same reservations about their religions. This needs and deserves to be clarified by further research.

As a consequence, our findings suggest that it would be beneficial to perceive Muslim refugees' religiosity as a resource rather than a risk, as it contributes to their ability to cope with life and thus their social integration. Therefore, persons as well as institutions involved with caring for and educating young Muslim refugees are advised to be accepting and supportive of their religiosity and to counteract anti-Muslim or anti-religious attitudes and discrimination. This could be done, for instance, by accounting for the availability of suitable mosque communities in the vicinity of refugee accom-

modation; by providing rooms for prayer, meditation, and (inter-)religious exchange in communal accommodation; and by offering religious education as an integral part of school education (not only as a separate subject but also integrated into diverse subjects and school life).

From an international perspective, it is worth mentioning that for a long time, Germany did not see itself as an immigration society. Although large migration movements to Germany occurred in the past, immigration in this country is still mainly discussed in terms of "adaptation." The focus is on how newly arrived fellow citizens integrate into German society, rather than on their well-being and how they can enrich the society. This attitude may be seen as typical for most European countries and to differ from the United States or Canada. Accordingly, the findings of this study can probably be generalized to European countries, despite national differences in relation to people from other countries, such as those caused by the colonial era. If this assumption is correct, the extent to which the findings can be transferred to the US or Canada would have to be examined separately.

This conclusion was drawn in light of the limitations of the present study. Its cross-sectional design allowed for only limited analyses. To test the real causal effect of religiosity on purpose in life, the interdependencies between the constructs need to be analyzed in longitudinal studies—an analysis the authors intend to devote themselves to in their next research projects. Also, future research projects may campaign for more financial resources that allow more intense sampling strategies that focus on personal contacts and personal interviews to gain a more representative sample. Finally, we recommended that further research distinguishes between different types, styles, and

contents of Muslim religiosity and expands to refugees adhering to other religions or worldviews to get a more detailed picture of diverse approaches to coping with life as well as to social integration.

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## EXPLANATORY NOTICE OF APPROVAL

The research project Religion as Resource and Risk was approved by the Bavarian State Ministry of the Interior, for Sport and Integration. In addition, the questionnaires used were reviewed and approved by the data protection officers of both the University of Siegen and the Friedrich-Alexander-Universität Erlangen-Nürnberg.

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The authors report how they determined their sample size, all data exclusions, all manipulations, and all measures in the study (for the measures of the entire project, see the pre-registration: <https://osf.io/8h97t>).

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## APPENDIX A

## VARIABLES AND THEIR STATISTICAL PARAMETERS

Items, item phrasing, number of observations, means of items (standard deviation), minimum, maximum, deviations of the distributions from normal, and factor loadings (standard error) of items and residual covariance between items from the complete confirmatory factor analyses (CFA) model (see supplementary material: <https://osf.io/znm5>).

Item	Item phrasing	n	M (SD)	Min./Max.	Skewness/kurtosis <sup>a</sup> (SE)	$\lambda$ (SE)
DEPENDENT VARIABLE						
Purpose in life						
Prompt: How would you rank yourself on the following alternatives?						
pil_a	Scale	219	7.81 (1.76)	1.11/11	-0.55/0.49 (.12)	-
Enthusiasm	I am usually: Completely bored. ... Exuberant, enthusiastic.	221	7.39 (2.38)	1/11	-0.35/-0.54 (.16)	.63 (.06)
Suspense	Life to me seems: Completely routine. ... Always exciting.	220	6.52 (2.55)	1/11	-0.17/-0.51 (.17)	.44 (.08)
Determination	In life I have: No goals or aims at all. ...Very clear goals and aims.	221	8.88 (2.32)	1/11	-1.32/1.42 (.16)	.64 (.06)
Alternation	Every day is: Exactly the same. ... Constantly new and different.	219	6.60 (2.70)	1/11	-0.21/-0.71 (.18)	.57 (.06)

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Item	Item phrasing	n	M (SD)	Min./Max.	Skewness/kurtosis <sup>a</sup> (SE)	$\lambda$ (SE)
Joy	If I could choose, I would: Prefer never to have been born. ... Like nine more lives just like this one.	219	7.82 (2.83)	1/11	-0.77/-0.24 (.19)	.72 (.05)
Fulfillment	My life is: Empty, filled with despair. ... Running over with exciting, good things.	220	7.54 (2.58)	1/11	-0.7/0.02 (.17)	.80 (.04)
Certainty	When thinking about my life I: Often wonder why I exist. ... Always see a reason for my being here.	220	8.45 (2.60)	1/11	-1.1/0.59 (.18)	.73 (.05)
Inspiration	I regard my ability to find meaning, a purpose, or a mission in life as: Practically none. ... Very great.	221	8.27 (2.14)	1/11	-0.82/0.67 (.14)	.73 (.05)
Content	I have discovered: No mission or purpose in life. ... Clear-cut goals and a satisfying life purpose.	221	8.91 (2.22)	1/11	-1.27/1.53 (.15)	.70 (.06)

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Item	Item phrasing	n	M (SD)	Min./Max.	Skewness/kurtosis <sup>a</sup> (SE)	λ (SE)
	Residual covariance	r (SE)				
	suspense~~alternation	.50 (.06)				
INDEPENDENT VARIABLES						
Religiosity						
Prompt: In this section we would like to ask you a few questions about religion and your faith.						
crs_5	Scale	214	3.86 (0.79)	1/5	-0.76/0.38 (.05)	-
Intellect	How often do you think about religious issues?	218	3.45 (1.12)	1/5	-0.53/-0.3 (.08)	.56 (.07)
Ideology	To what extent do you believe that Allah or something divine exists?	220	4.81 (0.65)	1/5	-4.00/17.21 (.04)	.42 (.09)
public_practice	How often do you take part in Friday prayer (salat)?	215	2.96 (1.64)	1/5	0.07/-1.63 (.11)	.51 (.06)
private_pactice	How often do pray the Du'ā'?	214	3.84 (1.29)	1/5	-0.61/-0.96 (.09)	.81 (.05)

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Item	Item phrasing	n	M (SD)	Min./Max.	Skewness/kurtosis <sup>a</sup> (SE)	$\lambda$ (SE)
Experience	How often do you experience situations in which you have the feeling that Allah or something divine intervenes in your life?	214	4.25 (0.97)	1/5	-1.29/1.15 (.07)	.58 (.08)
crs_5c	Categorization of crs_5 (according to <a href="#">Huber &amp; Huber, 2012</a> ): nonreligious: 1.0–2.0; religious: 2.1–3.9; highly religious: 4.0–5.0	214	2.51 (0.56)	1/3	-0.61/-0.69 (.04)	-
Religion as a support in life						
Prompt: Some people's religion or faith helps them to deal with difficult situations. How is that for you?						
rel_sup	How much has your religion/faith helped you to cope with the new situation in Germany?	216	3.73 (1.26)	1/5	-0.72/-0.57 (.09)	-

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Item	Item phrasing	n	M (SD)	Min./Max.	Skewness/kurtosis <sup>a</sup> (SE)	$\lambda$ (SE)
Physical health status						
	Prompt: The next questions are about how you are doing and feeling in your current situation.					
health_status	How would you describe your state of health in general?	221	4.17 (0.78)	2/5	-0.58/-0.35 (.05)	-
Duration of stay						
duration_stay <sup>b</sup>	When did you arrive in Germany?	213	55.69 (28.89)	3/95	-0.57/-1.25 (1.98)	-
Housing situation						
	Prompt: Finally, we would like to ask you a few questions about your current living arrangements.					
housing_family	Who do you live with? living with family members (other response options were: with friends or acquaintances; with other people; alone)	221	0.68 (0.47)	0/1	-0.78/-1.39 (.03)	-
Type of accommodation						
	Prompt: Finally, we would like to ask you a few questions about your current housing arrangements.					
accom_private	Is it a shared accommodation facility (0) or a private accommodation (1)?	216	0.55 (0.50)	0/1	-0.18/-1.97 (.03)	-

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Item	Item phrasing	n	M (SD)	Min./Max.	Skewness/kurtosis <sup>a</sup> (SE)	$\lambda$ (SE)
Perceived social support						
Prompt: Furthermore, how much do the following statements apply to you?						
soc_sup	Scale	220	3.63 (1.01)	1/5	-0.64/0.03 (.07)	-
soc_sup1	When I get under pressure, I have people who help me.	220	3.64 (1.14)	1/5	-0.61/-0.31 (.08)	.83 (.04)
soc_sup2	No matter how bad it will get, I have people I can always rely on.	220	3.53 (1.18)	1/5	-0.55/-0.36 (.08)	.84 (.04)
soc_sup3	In times of stress and pressure, I find support from people who are important to me.	219	3.72 (1.13)	1/5	-0.65/-0.39 (.08)	.74 (.06)
Opportunity structure religious community						
Prompt: In the following questions, we are interested in whether you have contact with religious communities in your area. What are your experiences?						
rel_comm	There is a religious community within easy reach that suits me (e.g., a church congregation, mosque congregation, or similar).	210	0.55/(0.50)	0/1	-0.21/-1.97 (.03)	-

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Item	Item phrasing	n	M (SD)	Min./Max.	Skewness/kurtosis <sup>a</sup> (SE)	$\lambda$ (SE)
Perceived institutional support						
	Prompt: Now we would like to ask you a few questions about your life and experiences in Germany.					
inst_sup	Scale	208	3.07 (0.78)	1/4	-0.63/-0.28 (.05)	-
inst_sup1 <sup>c</sup>	What is your impression: Do the refugees get enough help here at the local level?	215	3.11 (0.84)	1/4	-0.67/-0.19 (.06)	.64 (.15)
inst_sup2 <sup>c</sup>	Do you personally get enough help?	215	3.00 (0.92)	1/4	-0.54/-0.68 (.06)	.96 (.21)
BACKGROUND VARIABLES						
Age	How old are you?	222	5.18 (2.79)	1/10	0.06/-1.35 (.19)	-
Sex	You are ... male (0), female (1)	222	0.38 (0.49)	0/1	0.48/-1.78 (.03)	-
Nationality						
	Prompt: What is your nationality?					
Syrian <sup>d</sup>		222	0.75 (0.43)	0/1	-1.16/-0.66 (.03)	-
Afghan <sup>d</sup>		222	0.14 (0.34)	0/1	2.12/2.51 (.02)	-
Iraqi <sup>d</sup>		222	0.11 (0.32)	0/1	2.43/3.94 (.02)	-
Protection status (assessed via interviewer protocol)						
Permanent <sup>d</sup>		196	0.16 (0.37)	0/1	1.86/1.46 (.03)	-
Temporary <sup>d</sup>		196	0.71 (0.45)	0/1	-0.94/-1.12 (.03)	-
Pending <sup>d</sup>		196	0.11 (0.31)	0/1	2.52/4.38 (.02)	-
Rejected <sup>d</sup>		196	0.02 (0.14)	0/1	6.73/43.54 (.01)	-

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Continued.

Item	Item phrasing	n	M (SD)	Min./Max.	Skewness/kurtosis <sup>a</sup> (SE)	$\lambda$ (SE)
School attendance and other activities						
Prompt: Next is whether you go to school or do other activities.						
school_attend <sup>d</sup>	response option: I attend school (other response options were: I have a job; I attend a course outside of school; I attend university/college; none of these apply)	216	0.54 (0.50)	0/1	-0.15/-1.99 (.03)	-
Type of school, if school attendance						
Prompt: Which type of school do you attend?						
Secondary <sup>d</sup>	Includes the response options: special education school (Förderschule, Sonderschule); secondary modern school (Hauptschule, Mittelschule); secondary/junior high school (Realschule); comprehensive secondary school (Gesamtschule)	111	0.41 (0.49)	0/1	0.38/-1.87 (.05)	-
Vocational <sup>d</sup>	Response option: vocational school (Berufsschule)	111	0.36 (0.48)	0/1	0.57/-1.69 (.05)	-
Gymnasium <sup>d</sup>	Includes the response options: high school/grammar school (Gymnasium); evening school (Abendrealschule, Abendgymnasium); technical college/college/specialized upper-secondary school	111	0.23 (0.43)	0/1	1.24/-0.47 (.04)	-

Note. N = 222 for factor loadings and residual covariance (completely standardized coefficients) via full information maximum likelihood. English-item texts of the CRS are according to [Huber and Huber \(2012\)](#); item texts of the PiL-A are set in their original English wording (see [García-Alandete et al., 2019](#)); all other wordings of prompts and items are taken from the English version of the Religion as a Resource and a Risk questionnaire, which was checked by a certified translation agency and a native speaker. Descriptive statistics obtained through the R package "psych" ([Revelle, 2023](#)). Calculation of scale values based on at least 75% of answered items per case.  $p < .001$  for all factor loadings ( $\lambda$ ).

<sup>a</sup> Excessive kurtosis.

<sup>b</sup> In months.

<sup>c</sup> Reversed coded.

<sup>d</sup> Dichotomized response options coded 0 (no), 1 (yes).

## APPENDIX B

**BIVARIATE LATENT CORRELATIONS OF PURPOSE IN LIFE SCALE FOR ADOLESCENTS (PIL-A) WITH ALL POTENTIAL PREDICTORS INCLUDING MEASURES OF CONSTRUCT VALIDITY, RANGE OF VALUES, AND MEANS (STANDARD DEVIATION)**

Concept	Variable	PiL-A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Religiosity	1 CRS-5	.27*	-																				
	2 Religion as a support in life	.13	.61*	-																			
Life situation	3 Physical health status	.24*	.05	-.04	-																		
	4 Duration of stay (months)	-.13	-.04	-.09	.14*	-																	
	5 Housing situation (family)	.09	.26*	.04	.07	.16*	-																
Social resources	6 Private accommodation	.00	.06	.14	.00	.20*	.09	-															
	7 Social support	.41*	.28*	.15	.29*	.07	.30*	.09	-														
	8 Institutional support	.17	-.14	-.12	.27*	-.08	-.09	-.27*	.16	-													
Background variables	9 Religious community	-.01	.21*	.09	.13	.07	.02	-.15*	-.05	.09	-												
	10 Age	.03	-.16	-.12	-.04	.07	-.41	.15	-.20	-.16	.00	-											
	11 Sex <sup>a</sup>	.03	.28*	.16*	-.03	.09	.32*	.06	.23*	-.11	-.06	-.04	-										
	12 Syria	-.03	.08	.04	.15*	.36*	.12	.21*	.00	-.06	.16*	.13	.02	-									
	13 Afghanistan	-.01	-.07	.00	-.14*	-.24*	-.16*	-.29*	-.04	.09	-.00	-.12	-.04	-.69*	-								
	14 Iraq	.07	-.03	-.05	-.06	-.23*	.01	.03	.05	-.02	-.22*	-.05	.01	-.62*	-.14*	-							

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Continued.

Concept	Variable	PiL-A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	15 Permanent/naturalized	.09	-.02	-.06	.02	.21*	.03	.08	.01	-.04	.09	.08	.01	-.08	.14	-.03	-						
	16 Temporary	-.04	.06	.07	.05	-.06	.03	.03	.17*	.09	-.01	-.06	-.06	.16*	-.18*	-.05	-.65*	-					
	17 Pending	-.08	-.06	-.03	-.13	-.08	-.05	-.05	-.21*	-.07	-.06	.03	.06	-.03	.04	-.02	-.15*	-.55*	-				
	18 Rejected	.09	-.03	.00	.06	-.15	-.05	-.05	-.12	-.04	-.07	-.01	.04	-.28*	.07	.29*	-.06	-.23*	-.05*	-			
	19 School attendance	-.05	.14	.05	.00	.11	.40*	.12	.12	.10	.00	-.60*	.13	.03	.00	-.04	-.08	.04	-.01	.06	-		
	20 Secondary general school <sup>b</sup>	-.09	-.12	-.10	.14	-.10	.10	-.15	.07	.06	-.12	-.38*	.01	.05	-.05	-.11	-.04	.14	-.17	-.03	<sup>c</sup>	-	
	21 Vocational school <sup>b</sup>	-.03	.12	.15	-.06	-.04	-.15	.09	-.02	.04	.08	.24*	-.14	-.18	.15	.14	-.04	.00	.13	-.03	<sup>c</sup>	-.62*	-
	22 Gymnasium/high school <sup>b</sup>	.14	.06	-.09	-.11	.14	.01	.07	-.07	-.07	.03	.16	.11	.12	-.14	-.02	.12	-.15	.05	.06	<sup>c</sup>	-.45*	-.38*
	α	.88	.69	-	-	-	-	-	.84	.76	-	-	-	-	-	-	-	-	-	-	-	-	-
	ω	.86	.72	-	-	-	-	-	.85	.81	-	-	-	-	-	-	-	-	-	-	-	-	-
	AVE	.45	.37	-	-	-	-	-	.65	.69	-	-	-	-	-	-	-	-	-	-	-	-	-
	ASV	.09	.05	-	-	-	-	-	.09	.02	-	-	-	-	-	-	-	-	-	-	-	-	-
	MSV	.17	.08	-	-	-	-	-	.17	.03	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes. n = 222. PiL-A = Purpose in Life Scale for Adolescents; CRS-5 = Centrality of Religiosity Scale; α = Cronbach's alpha; ω = omega; AVE = average variance extracted; ASV = average shared variance; MSV = maximum shared variance. Completely standardized correlation coefficients. See the script in the supplementary material (<https://osf.io/znm5>) for standard errors and unstandardized correlations. Dichotomized response options (0 = no, 1 = yes) for variables 5, 6, and 9–22.

<sup>a</sup> 0 = male, 1 = female.

<sup>b</sup> n = 111 (calculations include only the subsample of people who were attending school).

<sup>c</sup> Calculation of this coefficient does not make sense.

\* p < .05 (null hypothesis significance test); p < .05 (minimum-effect testing, with a predefined smallest effect size of interest of r < |.10|) for all correlations involving column PiL-A in bold.

## APPENDIX C

### FREQUENCIES OF THE PiL-A (PURPOSE IN LIFE) AND CRS-5 (RELIGIOSITY) VARIABLES

Response category	N	1		2		3		4		5		6		7		8		9		10		11	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
PiL-A																							
Enthusiasm	221	1	1	6	3	8	4	12	5	21	10	29	13	29	13	38	17	32	15	20	9	25	11
Suspense	220	8	4	7	3	15	7	19	9	22	10	34	16	32	15	38	17	21	10	4	2	20	9
Determination	221	3	1	3	1	3	1	4	2	5	2	17	8	15	7	23	10	37	17	41	19	70	32
Alternation	219	9	4	10	5	12	6	19	9	23	11	29	13	31	14	29	13	24	11	12	6	21	10
Joy	219	9	4	7	3	5	2	9	4	12	6	22	10	22	10	26	12	35	16	22	10	50	23
Fulfillment	220	10	5	2	1	3	1	11	5	18	8	25	11	28	13	35	16	32	15	28	13	28	13
Certainty	220	5	2	5	2	7	3	4	2	6	3	16	7	19	9	30	14	37	17	26	12	65	30
Inspiration	221	3	1	1	1	3	1	1	1	14	6	22	10	30	14	35	16	38	17	39	18	35	16
Content	221	3	1	1	1	4	2	2	1	8	4	10	5	19	9	36	16	26	12	42	19	70	32
CRS-5																							
Intellect	218	17	8	20	9	67	31	75	34	39	18	-	-	-	-	-	-	-	-	-	-	-	-
Ideology	220	3	1	1	1	8	4	11	5	197	90	-	-	-	-	-	-	-	-	-	-	-	-
Public practice	215	64	30	35	16	26	12	26	12	64	30	-	-	-	-	-	-	-	-	-	-	-	-
Private practice	214	10	5	29	14	49	23	23	11	103	48	-	-	-	-	-	-	-	-	-	-	-	-
Experience	214	4	2	9	4	29	14	59	28	113	53	-	-	-	-	-	-	-	-	-	-	-	-

Note. N = 222. PiL-A = Purpose in Life Scale for Adolescents; CRS-5 = Centrality of Religiosity Scale.