

Article

Perspectives Matter: Insecure Residency Status Accounts for Aggressive Emotions in Adolescent Refugees

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Abstract: Unaccompanied refugees are a high-risk group for trauma-induced psychiatric disorders. Besides traumatic experiences pre- and during migration, post-migration stressors such as insecure residency status affect refugees' mental health and foster aggressive emotions. High levels of psychological distress and psychopathology distort time perspectives. Consequently, an insecure residency status linked to distress may influence a refugee's time perspective. This study investigated psychological distress, PTSD symptoms, aggressive emotions, and time perspectives in 33 unaccompanied adolescent refugees with and without secure residency status in Germany. Refugees with precarious residency status showed higher levels of overall distress and aggression than individuals with secure residency status. Both groups revealed a distorted time perspective profile, but individuals with a residence permit showed a stronger orientation toward the present hedonistic perspective than those without a permit. Higher aggressive emotions were related to insecure status, higher levels of psychological distress, more pronounced PTSD symptoms, and lower orientation to future time perspective. Distorted time perspectives among refugees may be caused by traumatic experiences and having been uprooted, independently of their residency status in the host country. A higher future orientation may buffer the association between distorted time perspectives and aggressive emotions in the highly stressed group of unaccompanied adolescent refugees.

Keywords: adolescent refugees; time perspective; aggression; residency status; mental health



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1. Introduction

Over the past decade, the number of forcibly displaced people has steadily increased and is currently estimated to have risen to over 108 million people worldwide (United Nations High Commissioner for Refugees [1]. “Refugees” are a very heterogeneous group in terms of ethnicity, cultural background, experiences, health needs, and health behaviors [2,3]. Especially for minor refugees, cultural context seems to be a continuously changing framework with different and sometimes conflicting values due to contrasts between pre-migration, migration, and post-migration contexts [4]. In host countries, they face the challenge of acculturation. This process includes culture learning, for example acquiring culture-specific behaviors such as language, communication styles, norms, and values, as well as social identification, in particular identification in relation to members of their own ethnic group as well as to members of the society in the host country [5]. Minor refugees must go through that process while simultaneously undergoing normal developmental changes [6]. There are great variations in how individuals manage acculturation. The challenges can be problematic if individual coping strategies and social support are lacking, in which case acculturative stress may result in reduced psychological well-being [5]. Four acculturation attitudes can be distinguished [5,7]: assimilation (individuals seek closeness to a new culture and do not want to maintain their own cultural identity),

separation (individuals avoid interaction with a new society and want to hold onto their original culture), integration (individuals want to have interaction with the new society while wishing to maintain their original culture at the same time), and marginalization (individuals are not interested in or are excluded from interaction with a new society and have a lack of interest in maintaining their original culture—often for reasons of enforced cultural loss). This heterogeneity complicates systematic descriptions and generalizations of study results for the group of “refugees”. Nevertheless, previous studies were able to reveal some specific characteristics of certain refugee groups.

Earlier studies have shown that, in particular, refugee children and adolescents are exposed to multiple traumatic experiences before and during flight [8–10]. Because of this highly traumatic exposure, young refugees between the ages of 2 and 23 have substantially higher rates of psychiatric disorders, in particular post-traumatic stress disorder (PTSD) and depression, than do members of the general population [11]. Kien and colleagues [11] showed that up to half of refugee minors could be affected by PTSD and that up to a third of minor refugees could be affected by either depression or anxiety disorder. In comparison to accompanied minor refugees, unaccompanied minors experience more traumatic events, such as physical violence, imprisonment, and witnessing the killing of a family member, and consequently have higher levels of mental health problems [9,12,13]. Therefore, unaccompanied minor refugees (UMR) are a high-risk group for trauma-induced psychiatric disorders [14,15]. While some UMR fled their home country without a parent, others lost their families during migration. There are many reasons to flee. The most common reasons for UMR include the death of family members, persecution due to their ethnicity or religion, physical and sexual violence inside or outside the family, and war [16].

Among UMR arriving in Europe, more than 90% are boys [17]. The low proportion of girls might be due to dangers during migration. Since the route to Europe is illegal, refugees must use dangerous routes, which they usually have to walk on foot. They must either cross uncertain terrain across the Balkans or attempt the dangerous crossing of the Mediterranean. Many refugees die en route to Europe [18]. Regarding traumatic experiences, previous studies indicate that unaccompanied girls are at higher risk of becoming victims of sexual abuse than unaccompanied boys [19]. However, there are contrasting study results that show no gender differences in experiences of stressful life events including sexual abuse [20]. Accordingly, there are earlier studies that indicate gender differences in UMRs’ mental health, while other studies found no such differences between male and female UMRs [12].

Mental disorders such as PTSD are associated with deviations from an optimal time perspective [21]. Time perspective is based on cognitive processes that partition an individual’s perception into past, present, and future temporal frames [22]. According to Zimbardo and Boyd [23], the individual time perspective comprises at least five time dimensions: Past Negative (PN), Past Positive (PP), Present Fatalistic (PF), Present Hedonistic (PH), and Future (F). Low levels of PF and PN, moderately high levels of F and PH, and a high degree of PP represent an optimal time perspective [21], which is associated with good social functioning and mental health [24].

In contrast to the optimal time perspective, individuals with PTSD show high levels of PN and PF, and low levels of PP and F [21]. High levels of depressive symptoms correlate with PN and PF (positively) and with PP (negatively). In addition, suicidality is associated with a low level of F [25]. Two recent studies show that deviations from the optimal time perspective mediate the relationship between lifetime trauma exposure and the severity of PTSD symptoms [26], as well as the impact of early childhood trauma on the level of depressive symptoms [27].

In terms of refugees, a study from Germany [28] indicates that adolescent refugees exhibit distorted time perspectives with a high orientation toward PN and PF and a low orientation toward PP, PH and F. In that study, a high orientation toward the PN was associated with high levels of PTSD symptoms and depression, while a low orientation toward F was related to high levels of anxiety. A study of time perspectives among adult

Syrian refugees in Greece showed that levels of PN, PF, and F correlated with PTSD symptoms [29].

A variety of time perspectives are also linked to aggressive emotions and aggressive behaviors. Zimbardo and Boyd [22] showed that there are strong relationships between aggression and high orientation toward PN and PF, while aggression correlates negatively with PP. Stolarski and colleagues [30] confirmed that PN, PF, and PH are positively associated with several dimensions of aggression, namely physical aggression, verbal aggression, anger, and hostility, whereas PP and F were negatively related to aspects of aggression. The results of their in-depth analysis suggest that individuals with a high orientation toward PN, PF, or PH tend to exhibit affective and behavioral aggression and that high levels of PP and F may attenuate this tendency toward aggression.

As mentioned previously, refugees have been found to exhibit time perspective profiles with high levels of PN and PF and low levels of PP and F, which seem to be associated with a proneness toward aggression. Indeed, a study revealed that around 20% of unaccompanied refugees in Germany had feelings of hostility within a clinically meaningful range according to self-ratings [31]. Refugees' aggressive behavior has also been mentioned as a common problem by those providing care for them in Germany [32]. Traumatic experiences may influence one's time perspective, making one prone to develop hostile attitudes toward others [30]. Aggression, irritability, or destructive behaviors are possible symptoms according to DSM 5 criteria for PTSD [33]. In addition to traumatic experiences and distorted time perspectives, a lack of sleep, which is common in individuals suffering from PTSD, as well as high psychological distress may foster aggressive feelings and aggressive behaviors [34]. Adolescent refugees suffer, on average, from increased psychological distress, which may be attributed to post-migration stressors [31].

Beside traumatic experiences before and during migration, ongoing stressors in host countries additionally affect refugees' mental health [35,36]. Some studies suggest that such post-migration stressors have even a stronger impact on mental health than traumatic events that were experienced prior to arriving in host countries [37,38]. Typical post-migration stressors include asylum proceedings and an uncertain legal status [39,40]. Applicants for international protection who face delays in their asylum proceedings were found to be at high risk for psychiatric disorders such as depressive, somatoform, and anxiety disorders [41]. Refugees with insecure residency status in European countries suffer from high levels of psychological distress and depressive symptoms [42]. Minors and adolescents in Germany whose asylum applications had been rejected showed more mental health problems than refugees whose applications had been accepted [43]. In contrast to permanent residency permits, temporary visas that do not guarantee permanent protection seem to be linked to enduring mental health problems [44]. However, a systematic literature review reveals inconsistent results regarding the impact of residence status and length of asylum proceedings on UMRs' mental health [45].

Residency status seems to also be associated with certain forms of aggression. A Dutch study of data on more than 230,000 asylum-seeking migrants showed that the probability of being a crime suspect was higher among refugees with insecure residency status than in naturalized individuals and permit holders with secure residency status [46]. An insecure status is related to insecurity about the future as well as deprivations and restrictions on individual freedoms that result in frustration, which may trigger certain forms of criminal behavior [46]. The complex relationship between residency status and aggression has yet to be thoroughly investigated.

As already shown, insecure residency status seems to increase susceptibility to psychiatric disorders, particularly for depression [42] and for aggression [46]. Depressive symptoms, as well as aggression, are associated with high orientation toward PN and PF and low orientation toward PP [22,25]. Such a distorted time perspective was found in adolescent refugees [28]. This raises the question of whether residency status is also associated with a distorted time perspective. A relation of this nature has not yet been investigated.

Between 2015 and 2022, more than two million applicants for international protection arrived in Germany. Most of them fled Afghanistan and Syria [47]. Germany received more than 108,000 UMR between 2015 and 2019 [48]. It was the aim of the present study to compare time perspectives of unaccompanied adolescent refugees with a secure residency status to those with a precarious residency status in Germany. In addition, PTSD symptoms, the extent of aggressive emotions, and the level of psychological distress were assessed. Relationships between aggression and the other variables were examined. To avoid any bias due to possible gender-related effects, the study was restricted to male refugees. The study was also limited to the two main countries of origin, Afghanistan and Syria, in order to avoid excessive heterogeneity within the sample. The study was framed by three hypotheses:

1. Adolescent refugees with insecure residency status will show higher levels of psychological distress, aggressive emotions, and PTSD symptoms compared to individuals with secure residency status.
2. Adolescent refugees with insecure residency status will exhibit lower orientation to F and lower orientation to PH compared to refugees with secure residency status.
3. Compared to adolescent refugees with secure residency status, individuals with insecure residency status will show higher levels of aggressive emotions.

2. Materials and Methods

2.1. Participants and Procedure

A total of 33 males between 16 and 25 years of age who fled as UMRs from Afghanistan or Syria to Germany participated in this cross-sectional study. They were recruited from several youth welfare residential facilities and an outpatient clinic for child and adolescent psychiatry in North Rhine-Westphalia, Germany. Adolescents with illiteracy, obvious symptoms of psychosis, or known drug or alcohol use disorders were excluded from participating in the study.

For recruitment, information about the contents and aim of the study were sent to youth welfare residential facilities for UMR and the outpatient clinic for child and adolescent psychiatry. Afterwards, named facilities suggested potential participants from their institutions who were screened for the exclusion criteria. If no exclusion criterion was met, potential participants received information leaflets about the study in their native language. They were informed about the aims of the study, and that their participation would be voluntary and anonymous. If refugees agreed to participate, they were informed again verbally and in writing about the aim of the study, the study procedure, and their rights as participants. Subsequently, they answered the study questionnaires in an individual setting. One member of the study team was present in case participants had any questions or problems. After completing the questionnaires, participants received a voucher for 10€ for a chemist's shop.

Differences between refugees with secure residency status and those with precarious residency status were investigated. Consequently, this study has a between-subject design.

The Zimbardo Time Perspective Inventory (ZTPI) [49] was used to assess time perspectives. The extent of PTSD symptoms was measured via the Impact of Event Scale revised (IES-R) [50]. Psychological distress as well as the severity of aggressive emotions were examined using the respective scales of the Brief Symptom Checklist (BSCL) [51]. Participants from Afghanistan answered the Dari language version of the instruments. The Arabic language versions were provided to the adolescents from Syria.

2.2. Ethics Statement

Upon receiving a positive vote from the Research Ethics Committee of the University of Wuppertal, Germany to conduct the study, participants were recruited. Adolescents and their legally authorized representatives were given adequate information about the nature of the study in their native language and provided their informed consent prior

to participating. The study was carried out in accordance with the ethical principles for medical research involving human subjects (Declaration of Helsinki, 31 July 2017).

2.3. Measures

Syrian participants were given the Arabic version of the IES-R [52]. The ZTPI and the latest version of the BSCL were unavailable in both Arabic and Dari. As such, these questionnaires were translated from the German into Arabic and Dari languages and then subsequently back-translated into German by a professional German-Arabic and German-Dari translator, respectively. The back-translated versions proved to be identical in content to the original German versions. The procedure as described above aligns with cross-cultural research recommendations [53].

2.3.1. Time Perspective Inventory (ZTPI)

The German version of ZTPI [54] is a self-reported measure in which responses are provided by participants on a 5-point Likert scale (1 = very untrue, 5 = very true). The ZTPI examines how people project themselves in time according to their attitudes and orientation toward the past, present and future. The 56-item ZTPI comprises five subscales: Past Negative, Past Positive, Present Hedonistic, Present Fatalistic and Future. A pessimistic attitude toward the past is assessed by PN; this dimension may also reflect possible traumatic experiences. PP reflects a positive attitude toward the past. PH is linked to a desire for enjoyment and pleasure without concern for risks and future consequences. The belief that one's fate is predetermined and out of their control is assessed by PF. F measures the attitude toward setting and reaching long-term goals with the expectation of reward. Zimbardo, Sword and Sword [21] specified optimal values for each respective subscale. The ZTPI proved to be an effective standardized instrument for measuring time perspectives in a 24-country study [55]. The reliability estimates (Cronbach's alpha) of the subscales in the Arabic and Dari versions ranged from $\alpha = 0.53$ to $\alpha = 0.82$ (see Table 1). These reliability estimates are comparable with results from other studies [55,56].

Table 1. Reliability estimates (Cronbach's alpha) of the Arabic and Dari versions of measures.

Scale	Arabic Version	Dari Version
ZTPI scales		
Past Negative	0.78	0.73
Past Positive	0.61	0.68
Present Fatalistic	0.82	0.63
Present Hedonistic	0.63	0.53
Future	0.72	0.54
IES-R	0.91	0.95
BSCL scales		
Total distress GSI	0.97	0.92
Anger-hostility	0.81	0.83

2.3.2. Impact of Event Scale (IES-R)

The IES-R [50,57] is a self-report questionnaire of posttraumatic stress that is designed to assess the symptom clusters of PTSD, which are hyperarousal, avoidance, and intrusion. All 22 items in the IES-R are scored on a 5-point Likert scale (0 = not at all, 4 = extremely). A total score over 33 points indicates a PTSD diagnosis [58,59]. The Arabic version as well as the Dari version had excellent reliability (see Table 1).

2.3.3. Brief Symptom Checklist (BSCL)

The BSCL [51] is a 53-item self-report measure of psychological symptoms and distress modeled on the Symptom Checklist-90-Revised (SCL-90-R) [60]. Respondents specify the degree to which they have experienced symptoms in the past seven days on a 5-point Likert scale (0 = not at all, 4 = extremely). The Global Severity Index (GSI) includes the levels of

nine symptom dimensions: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, anger-hostility, phobic anxiety, paranoid ideation, and psychoticism. A cut-off score of GSI > 0.9 indicates individuals with above-average psychological distress. Beside the GSI, the individual score for the subscale anger-hostility was calculated. This subscale measures feelings of aggression such as urges to beat or harm someone, urges to break things or being easily annoyed. As shown in Table 1, there were excellent reliability estimates for GSI in both versions. The reliability estimates for the subscale anger-hostility was good in the Arabic as well as in the Dari version.

2.4. Statistical Analysis

The Mann–Whitney *U* test was used to test group differences in psychological distress, PTSD symptoms, aggressive emotions, and time perspectives because of the small subgroup sample size. Pearson correlations were calculated to assess the associations between aggression (anger-hostility subscale from BSCL) and time perspectives from ZTPI, PTSD symptoms (IES-R), and psychological distress (total score in BSCL withholding anger-hostility subscale). All analyses were conducted using the Statistical Package for the Social Sciences (SPSS for Windows, version 25).

3. Results

3.1. Sample Characteristics

A total of 33 male refugees participated in this study. They were between 16 and 25 years of age ($M = 18.6$, $SD = 2.3$), 16 of whom fled from Syria and 17 of whom fled from Afghanistan as UMRs to Germany. While 16 refugees had an insecure residency status (denied asylum status or awaiting a decision about their request for asylum), 17 refugees had a secure residence permit (asylum, granted refugee status or subsidiary protection).

3.2. Time Perspectives

In comparison to the optimal values in the ZTPI subscales, refugees show a higher orientation toward PN and PF as well as lower orientations to PP, PH, and F (Figure 1). There is a significant subgroup difference on the ZTPI subscale PH ($U = 70.5$, $z = -2.4$, $p = 0.02$): compared to refugees with insecure status ($M = 3.1$, $SD = 0.4$), individuals with a residence permit showed a higher orientation toward PH ($M = 3.4$, $SD = 0.4$), which is closer to the optimal value for this time dimension (3.9 points; cf. Zimbardo et al., 2012 [21]). There was no significant subgroup difference for the other scales of the ZTPI (Table 2), indicating that refugees with secure and insecure statuses do not differ across the other assessed time dimensions.

Table 2. Time perspectives, PTSD symptoms, psychological distress, and aggressive emotions for total sample, refugees with secure residency status, and refugees with insecure residency status.

	Total	Secure Status	Insecure Status	Subgroup Comparison			
	(<i>N</i> = 33)	(<i>n</i> = 17)	(<i>n</i> = 16)	<i>U</i>	<i>z</i>	<i>p</i>	<i>d</i>
ZTPI scales (<i>M</i> ± <i>SD</i>)							
Past Negative	3.4 ± 0.6	3.3 ± 0.6	3.5 ± 0.7	111.5	−0.9	0.38	0.3
Past Positive	3.2 ± 0.7	3.3 ± 0.6	3.1 ± 0.7	104.0	−1.2	0.26	0.4
Present Fatalistic	3.1 ± 0.7	3.2 ± 0.7	3.1 ± 0.6	111.5	−0.9	0.38	0.3
Present Hedonistic	3.3 ± 0.4	3.4 ± 0.4	3.1 ± 0.4	70.5	−2.4	0.02	0.9
Future	3.6 ± 0.5	3.7 ± 0.4	3.5 ± 0.5	113.0	−0.8	0.42	0.3
IES-R (<i>M</i> ± <i>SD</i>)	42.1 ± 19.6	36.4 ± 20.1	48.1 ± 17.9	89.5	−1.7	0.09	0.6
BSCL scales (<i>M</i> ± <i>SD</i>)							
Total distress GSI	1.4 ± 0.7	1.0 ± 0.7	1.9 ± 0.4	41.0	−3.4	0.001	1.5
Anger-hostility	1.2 ± 0.7	0.9 ± 0.7	1.5 ± 0.5	69.5	−2.4	0.02	0.9

Note: *M* and *SD* represent mean and standard deviation, ZTPI represents Zimbardo Time Perspective Inventory, BSCL represents Brief Symptom Checklist, and IES-R represents Impact of Event Scale-Revised.

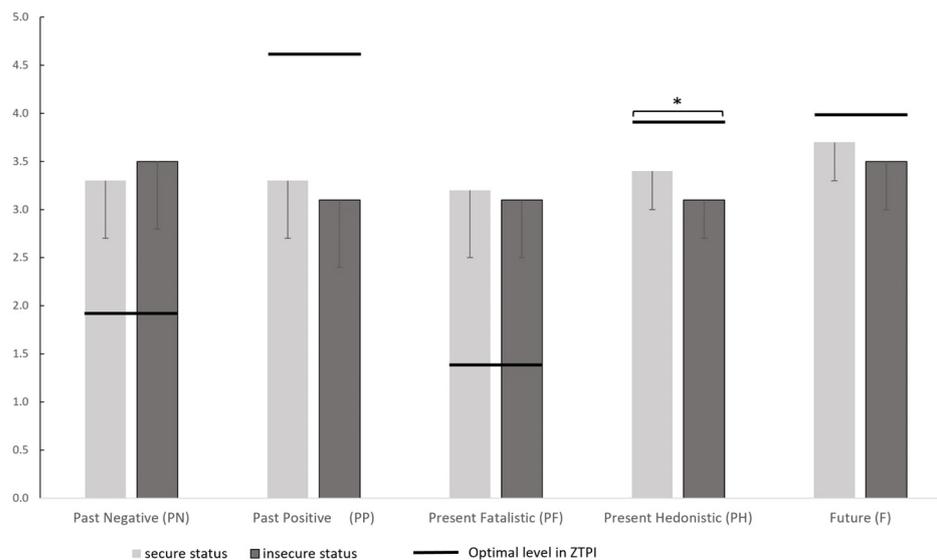


Figure 1. Time perspectives of refugees with secure residency status and those with insecure residency status. Mean scores (with standard deviation) in the Zimbardo Time Perspective Inventory (ZTPI) for the five time dimensions with corresponding optimal values (black line). The bracket indicates a significant difference between the two groups (* $p < 0.05$).

3.3. Psychological Distress, PTSD Symptoms and Aggressive Emotions

Descriptive values of the IES-R and BSCL scales are included in Table 2. Refugees with insecure residency status showed higher levels of total psychological distress than refugees with a residence permit ($U = 41.0$, $z = -3.4$, $p = 0.001$). In terms of the level of PTSD symptoms, adolescents with an insecure status did not differ from those with a secure residency status ($U = 89.5$, $z = -1.7$, $p = 0.09$). Individuals with a precarious residency status had higher levels of anger-hostility ($U = 69.5$, $z = -2.4$, $p = 0.02$) than refugees with an approved residence permit.

Correlation analyses revealed that scores in the BSCL subscale anger-hostility were positively correlated with total distress GSI ($r = 0.70$, $p < 0.001$), level of PTSD symptoms in IES-R ($r = 0.69$, $p < 0.001$), and higher orientation toward PN ($r = 0.43$, $p = 0.01$), and negatively correlated with orientation toward F ($r = -0.38$, $p = 0.03$). No significant correlations were found between feelings of anger/hostility and orientation toward PF ($r = 0.32$, $p = 0.07$), orientation toward PH ($r = -0.11$, $p = 0.55$), or orientation toward PP ($r = -0.22$, $p = 0.22$).

4. Discussion

Refugees' residency status in host countries seems to affect health conditions and present time perspectives. Adolescent refugees with precarious residency status exhibited higher levels of total distress, more aggressive emotions, and lower orientation toward PH than individuals with a secure residency status. The current study shows for the first time that residency status may also affect adolescent refugees' time perspective and account for aggressive emotions.

Consistent with our first hypothesis, refugees with insecure residency status exhibited higher levels of total distress than individuals with a secure residency status. The results are in line with earlier studies that indicate that post-migration stressors, in particular asylum claim rejections and temporary protection visas, are associated with relatively high levels of overall distress and mental health problems [44].

In comparison to the optimal values for time perspectives in the ZTPI, refugees with secure and insecure residency status showed a higher orientation toward PN and PF as well as lower orientations toward PP, PH, and F. An optimal time perspective that is associated with a low level of emotional suffering is distorted by traumatic experiences and, consequently,

by levels of PTSD symptoms. In particular, high levels of PTSD symptoms are linked to high orientation toward PN and PF and low orientation toward F in refugees [29]. Contrary to the expectations of hypothesis one, refugees with secure residency status and those with insecure residency status did not differ in the level of PTSD symptoms reported. Therefore, the results of the present study indicate that the similar time perspectives among refugees with secure and those with insecure status may be caused by the traumatic experiences of flight and being uprooted, independently of their residency status in the host country.

With the exception of PH, individuals with secure residency status did not exhibit significant differences across other time dimensions from refugees with insecure status. Consistent with our second hypothesis, individuals with a secure status showed a relatively higher orientation toward PH. A higher level of PH indicates, for example, more happiness [28], more positive affect, and more optimism [61]. The present results underscore the importance of secure residency status for wellbeing. Nevertheless, mean values of both groups were below the optimal value for this time dimension [21]. The generally low orientation of the young refugees on PH may be due to worries about missing family members or about relatives who remain in war zones, as well as difficulties with the integration processes in the host country. Additional worries about the future, the fear of being deported to their country of origin, and restrictions on personal freedoms because of insecure residency status may also be the cause of the significantly lower orientation toward PH in the group without residence permits.

Contrary to our second hypothesis, individuals with secure and those with insecure residency statuses showed no difference in orientation towards F. Worries about the future associated with an insecure residency status are most likely related to the time perspective F. It is therefore questionable whether the ZTPI represents thoughts and worries related to the future perspectives of refugees [28]. Carelli and colleagues [62] have already pointed out that the ZTPI does not take negative attitudes toward the future into consideration and suggested that negative feelings about the future constitute a crucial domain of time perspective. As a result, they extended the Swedish version of the ZTPI to include the subscale Future Negative [62]. Future large-scale studies are needed to address the issue of different attitudes toward the future in refugees and examine the impact of residency status on these two time perspectives.

Consistent with the expectations of hypothesis three, study participants with insecure residency status showed higher levels of aggressive emotions than individuals with secure residency status. Insecure residency status goes hand in hand with different restrictions, deprivations, and insecurities about the future that may result in frustration and certain forms of aggression [46]. This frustration may be particularly high among adolescent refugees with insecure residency status who cohabit with peers who have residency permits in youth welfare accommodations. The withholding of a secure residency status and self-comparisons with other refugees who have obtained a secure residency status may contribute to feelings of exclusion and discrimination. This may result in acculturation strategies of separation or marginalization. The marginalization strategy is associated with higher levels of mental health problems [63], while the separation strategy is associated with more antisocial behavior in comparison to other acculturation strategies [64]. It has already been indicated that refugees become separated or marginalized due to restrictions in host countries and therefore struggle to integrate [65].

Higher levels of psychological distress, PTSD symptoms, a higher orientation toward PN, and a lower orientation toward F were related to stronger feelings of anger and hostility. The relationships between aggressive emotions and PTSD symptoms as well as psychological distress are plausible. Aggressive feelings are possible symptoms according to the DSM 5 criteria for PTSD [33] and are associated with high levels of psychological distress [34]. Earlier studies showed that orientation toward PN is positively related to PTSD symptoms [66]. The dimension PN may reflect the PTSD symptoms of recurrent and intrusive memories of traumatic events according to the DSM 5 criteria for PTSD [33]. Hence, those who suffer from high levels of PTSD symptoms and psychological distress

are more susceptible to developing aggressive emotions. In terms of time perspectives, earlier studies have shown that aggression is related to high orientation toward PN, PF, and PH [30]. By contrast, orientation toward PF and PH were not related to aggressive emotions in the present study, which may be due to the special characteristics of the participants in this sample: pre- and peri-traumatic experiences, post-migration stressors, and being uprooted and unaccompanied by family members cause high levels of psychological distress and PTSD symptoms, which appear to result in deviations from optimal time perspective but not in a general proneness toward aggressive emotions. Stolarski and colleagues [30] pointed out that high orientations toward PP and F strongly attenuate the relationship between aggression and high orientations toward the remaining time dimensions. Therefore, a higher future orientation may buffer the association between distorted time perspectives and aggressive emotions in the highly distressed group of unaccompanied adolescent refugees. At this point, it is worth mentioning that in the present study, only aggressive emotions, and not aggressive behavior, were assessed. A study of young refugees in Germany [31] suggested that while refugees experience hostile and aggressive feelings, they do not typically act them out.

4.1. Limitations

The present study has several limitations. The findings of the study are restricted to male refugees from Afghanistan and Syria who arrived as UMR to Germany. These characteristics and the small sample size preclude generalizing these findings. Therefore, this study may be considered exploratory in nature. In general, refugees form a very heterogeneous group. Regarding refugee minors, being unaccompanied and older in age are both factors associated with a higher extent of mental health problems [67]. Among UMR, female UMR seem to reveal a higher vulnerability toward mental health problems in comparison to male UMR [68]. In addition, countries of origin seem to account for differences in levels of mental health problems in UMR [69]. Future large-scale studies should investigate the impact on time perspectives and aggressive emotions of factors such as age, being accompanied, residence status, country of origin, and gender.

The Arabic, as well as the Dari, version of the ZTPI revealed only acceptable internal consistencies for several subscales. Problematic reliability estimates are a common problem of the ZTPI, in particular for the PH and PH dimensions [70]. Nevertheless, the ZTPI is an accepted and widely used measurement for time perspective [55]. As already mentioned, it is questionable whether the ZTPI represents thoughts and worries related to the future perspectives of refugees since it does not consider negative attitudes toward the future. In addition, the ZTPI version used here did not consider the time dimension of the transcendental-future, which assesses thoughts about life after death. A previous study showed that Christians and Muslims scored above average while Jews, Buddhists, and individuals without religious affiliation scored below average on this scale [23]. Future studies of time perspective among refugees should include this scale to investigate whether individuals who have lost their homes and struggle to integrate into a new society due to lack of secure residency status differ in their orientation toward transcendental-future from refugees with secure residency status.

The measurements used to assess psychological distress, PTSD symptoms, and aggressive emotions are based on Western perspectives on mental diseases. The items and standard norms are, therefore, not culturally sensitive. Instruments that assess mental health problems according to Western classification systems tend to overlook characteristics such as cultural and sociocultural context that strongly influence the manifestation and expression of emotions [71]. Hence, the measurements used may have led to biased results.

Individuals with drug or alcohol use disorders or illiteracy were excluded from participating in the current study. As such, the results of this study may be biased because the individuals who suffer most from insecure residency status might not be considered. Adolescents who cannot read and understand correspondence from authorities or online information about options for obtaining secure residency status might feel desperate, helpless,

or hopeless. Future studies should include these individuals, for example, by presenting measures in an interview with an interpreter.

4.2. Implications

Integration is a challenge for both refugees as well as host countries. Poor integration is related to decreased employment rates and therefore to higher costs for welfare systems [72] and contributes to crime [46]. Traumatic experiences and post-flight stressors such as lengthy asylum-seeking procedures and insecure residency status have impacts on the socio-economic integration of refugees [73], and symptoms of psychiatric disorders are closely associated with difficulties with social integration [74]. The results of the current study reveal that unaccompanied adolescent refugees with insecure residency status were more susceptible to psychological distress and aggressive emotions than those with a secure status. As such, not only adolescent refugees with secure residency status but also those with insecure status should receive psychotherapy as well as support from social workers. Psychotherapeutic treatment has been shown to have a positive effect on traumatized refugees with and without legal residency status [42]. Refugees with insecure residency status may benefit from treatment in their very difficult life situation with great hopelessness and a lack of future perspectives. It may be useful to focus not only on reducing the symptoms of psychiatric disorders but also on achieving a more balanced time perspective according to the time perspective therapy [21] in treatment. With the support of therapists and social workers, they may develop perspectives for integration and future options for secure residency status. The impulse to act out on aggressive emotions may thus be prevented.

5. Conclusions

Refugees' residency status in host countries seems to affect health conditions, to disturb present time perspective, and to account for aggressive emotions. All these factors may impact integration in host countries. Refugees need a secure future perspective, which may not only reduce psychological stress and aggressive emotions, but also attenuate the effects of disturbed time perspectives. Therefore, it may be useful to focus not only on reducing symptoms of psychiatric disorders but also on a balanced time perspective in treatment. In addition, shorter asylum procedures with clear decisions could account for improved present time perspectives with enhanced well-being. Residence permits without restrictions and advanced future perspectives for young refugees may reduce the potential for aggression and therefore improve the processes of integration. This may be a benefit for both asylum seekers and host countries alike.

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Informed Consent Statement: Adolescents and their legally authorized representatives were adequately informed about the study in their native language and gave informed consent prior to participating.

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