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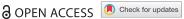
Prolonged grief disorder among asylum seekers in Germany: the influence of losses and residence status

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ABSTRACT

Background: Besides the high exposure to traumatic events, many refugees to Europe experienced tremendous interpersonal losses.
Objective: The aim of this study was to investigate the rate and potential risk factors of prolonged grief disorder (PGD) in recently fled asylum seekers who lived in collective accommodations in Germany.
Method: Three groups of asylum seekers from different countries ($N = 99$) completed the Traumatic Grief Inventory Self-Report Version (TGI-SR), Posttraumatic Stress Disorder Checklist-5 (PCL-5), and Patient Health Questionnaire depression module (PHQ-9). Individuals in Group 1 were waiting for asylum decisions ($n = 29$), Group 2 members were in appeal against rejected asylum claims ($n = 32$), and Group 3 members had been permitted temporary residence status ($n = 38$).
Results: The loss of a loved person was reported by 92% of participants. The criteria for provisional PGD diagnosis according to Prigerson criteria were met by 20% of participants, 16% fulfilled the criteria for DSM-5 persistent complex bereavement disorder. Probable posttraumatic stress disorder (45%) and depression (42%) rates were high. The total number of lost nuclear family members and PTSD symptoms were associated with higher and temporary residence status was predicted lower PGD symptom levels.
Conclusions: These results show that a substantial proportion of asylum seekers suffer from PGD. This points to the need to screen for problematic grief in the current refugee population in Europe.

HIGHLIGHTS
• Asylum seekers and refugees show high rates of prolonged grief disorder.
• Losses of nuclear family members, PTSD symptoms, and temporary residence status were all associated with prolonged grief symptom severity.
• Distressing grief trajectories need to be considered in health care policies.

Trastorno de duelo prolongado en solicitantes de asilo en Alemania: la influencia de las pérdidas y de la condición de residencia

Antecedentes: Además de la alta exposición a experiencias traumáticas, muchos refugiados que van a Europa han experimentado grandes pérdidas interpersonales.
Objetivo: El objetivo de este estudio fue investigar la tasa y factores de riesgo potenciales para el trastorno de duelo prolongado (PGD por sus siglas en ingles) en solicitantes de asilo que huyeron recientemente y que vivieron en alojamientos colectivos en Alemania.
Métodos: Tres grupos de solicitantes de asilos de diferentes países ($N = 99$) completaron el Inventario de Duelo Traumático Versión Autoadministrada (TGI-SR, por sus siglas en inglés), Lista de Verificación del Trastorno de Estrés Postraumático 5 (PCL-5, por sus siglas en inglés), y el módulo de depresión del Cuestionario de Salud del Paciente (PHQ-9, por sus siglas en inglés). Los sujetos del primer grupo se encontraban en espera de decisión respecto a su situación de asilo ($n = 29$), los del segundo grupo se encontraban en apelación del rechazo a su solicitud de asilo ($n = 32$), y a los del tercer grupo se les había permitido obtener la condición de residentes temporales ($n = 38$).
Resultados: El 92% de los participantes reportó la pérdida de algún ser querido. Un 20% cumplían los criterios para el diagnóstico provisional del trastorno de duelo prolongado según Prigerson et al. (2009), y un 16% cumplían los criterios para el trastorno persistente de duelo complicado según el DSM-5. Las tasas de trastorno de estrés postraumático probable (45%) y de depresión (42%) fueron altas. Tanto el número de miembros de la familia nuclear que se perdieron, como los síntomas del trastorno de estrés postraumático, y la condición de residencia temporal se asociaron a niveles más altos de trastorno de duelo prolongado.
Conclusiones: Estos resultados muestran que una proporción considerable de solicitantes de asilo padece PGD. Esto apunta a la necesidad de un tamizaje para duelo prolongado en la actual población de refugiados en Europa.

德国避难者的延长哀伤障碍：丧亲和居留状态的影响

背景：除了创伤事件的高概率暴露外，许多到欧洲的难民还经历了巨大的人际损伤。
目的：本研究旨在调查最近逃离在德国集中住宿区寻求庇护的难民中延长哀伤障碍（PGD）的发生率和潜在风险因素。
方法：来自不同国家（N= 99）的三组避难者完成了《创伤性哀伤自评清单》（TGI-SR）、《创伤后应激障碍检查表-5》（PCL-5）和《患者健康问卷调查抑郁模块》（PHQ－9）。

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第1组中的个人正在等待庇护决定（*n*= 29），第2组成员的庇护申请遭到拒绝后（*n*= 32）提出上诉，第3组成员被允许持有临时居留身份（*n*= 38）。
结果：92％的参与者报告了失去一个亲人。20％的被试符合Prigerson等（2009）提出的临时PGD诊断标准，16％符合DSM-5持续性复杂丧亲障碍的标准。可能创伤后应激障碍发生率（45％）和抑郁发生率（42％）较高。核心家庭成员死亡总数、创伤后应激障碍症状和临时居住状态均与PGD症状水平升高有关。
结论：这些结果表明避难者中较大比例患有PGD。这表明有需要筛查欧洲现有难民中存在问题的哀伤问题。

In 2016, Europe experienced the largest influx of refugees since the Second World War (United Nations High Commissioner for Refugees [UNHCR], 2017). Most refugees came from conflict areas, namely Syria, Afghanistan, and Iraq (Eurostat, 2018). Germany granted the majority of protections in the EU over the past few years (Eurostat, 2018). High prevalence rates of mental disorders have been well documented among refugees, especially with regard to post-traumatic stress disorder (PTSD) and depression (e.g. Gerritsen et al., 2006; Heeren et al., 2012, 2014). Although there is growing evidence that a large proportion of refugees experienced severe interpersonal losses in the context of armed conflicts (e.g. Momartin, Silove, Manicavasagar, & Steel, 2004; Nickerson et al., 2014), little research has investigated the psychopathological consequences of bereavement. The present study is the first to investigate pathological grief among asylum seekers and refugees from the recent migration movement to Europe.

The loss of a loved person is a major life-stressor that is usually accompanied by a period of more or less debilitating psychological and physical symptoms after which most bereaved people are able to recover (Stroebe, Schut, & Stroebe, 2007). A significant minority of bereaved people fail to adjust and develop mental disorders, including prolonged grief disorder (PGD; Prigerson et al., 2009). PGD is characterized by severe and disabling symptoms of separation distress, traumatic distress, and social/identity disruption, which persist for at least six months after the loss. Adapted from Prigerson et al. (2009) criteria, PGD is included as a diagnostic entity in the ICD-11 (Killikelly & Maercker, 2017; WHO, 2018). The DSM-5 lists a partly different concept, persistent complex bereavement disorder (PCBD), as a condition requiring further research (American Psychiatric Association, 2013). The two PGD concepts, Prigerson et al.'s (2009) PGD and DSM-5 PCBD, largely overlap with regard to symptoms, prevalence rates, and correlates, suggesting that they identify similar diagnostic entities (Boelen, Djelantik, de Keijser, Lenferink, & Smid, 2018; Maciejewski, Maercker, Boelen, & Prigerson, 2016). PGD can be discriminated from related disorders such as PTSD and depression (e.g. Boelen & van den Bout, 2005; Dillen, Fontaine, & Verhofstadt-Denève, 2009), although comorbidity is common

(Simon et al., 2007). Moreover, the cross-cultural validity of the PGD concept has been supported (Tay, Rees, Chen, Kareth, & Silove, 2016).

A recent meta-analysis revealed that about 9.8% of bereaved persons suffer from PGD through mainly non-violent death causes (Lundorff, Holmgren, Zachariae, Farver-Vestergaard, & O'Connor, 2017). However, PGD research has been largely based on specific bereavement groups (e.g. bereaved parents, widows) in industrialized societies. Most studies among conflict-affected populations have yielded higher PGD prevalence rates. PGD rates of 31–54% have been observed in Bosnian refugee samples (Craig, Sossou, Schnak, & Essex, 2008; Momartin et al., 2004). Stammel et al. (2013) found a PGD rate of 14% among survivors of the Khmer Rouge regime in Cambodia, who had lost a loved one during the regime more than 30 years ago. Research suggested several risk factors for PGD after war and displacement, including age, gender, relationship to the deceased, and traumatic loss (Craig et al., 2008; Momartin et al., 2004; Morina, Rudari, Bleichhardt, & Prigerson, 2010; Schaal, Jacob, Dusingizemungu, & Elbert, 2010; Stammel et al., 2013). Although common among refugees (Hengst, Smid, & Laban, 2018), bereavement overload (i.e. multiple losses in a short period of time; Neimeyer & Holland, 2006) did not emerge as a risk factor (Morina et al., 2010; Schaal et al., 2010; Stammel et al., 2013). The differentiation of losses within family and friends might be a more suitable approach to examine the impact of multiple losses (Hengst et al., 2018; Stammel et al., 2013); particularly as the familial relationship to the deceased has been shown to affect PGD severity (Lobb et al., 2010).

Furthermore, grief processes might be connected to depression (e.g. Momartin et al., 2004) and PTSD-symptoms among refugees. Nickerson et al. (2014) clustered symptom profiles of PGD and PTSD among Mandaean refugees in Australia. PGD class membership (16%) was predicted by adaptation difficulties (e.g. new language, poverty) and abuse-related traumatic events. Members of a combined PGD and PTSD class (16%) experienced more traumatic losses, abuse-related traumatic events, and difficulties stemming from the loss of culture and support. Apart from frequent interpersonal losses, many asylum

seekers in Western host countries are faced with additional stressors related to the asylum process and relocation (e.g. institutional accommodations, language problems; Hynie, 2018; Li, Liddell, & Nickerson, 2016; Porter & Haslam, 2005; Silove, Ventevogel, & Rees, 2017). There has been a recent international trend towards more restrictive asylum policies such as prolonged visa processing times or mandatory detention of asylum seekers (Li et al., 2016). Research points to the negative effect of restrictive asylum policies on various mental health outcomes (Li et al., 2016; Silove et al., 2017). Silove et al. (2007) reassessed mental health outcomes in asylum seekers in Australia over the course of the visa determination process. About four months after the asylum decision, rejected asylum seekers maintained high levels of depressive, anxiety, and PTSD symptoms, whereas those with residence permits showed significantly reduced symptom levels. In a sample of Iraqi refugees to the Netherlands, a longer visa determination process was associated with higher rates of affective and anxiety disorders, worse physical health, and lower quality of life (Laban, Gernaat, Komproe, Schreuders, & de Jong, 2004; Laban, Komproe, Gernaat, & de Jong, 2008). Although the negative influence of post-migration living difficulties on PGD symptoms has been documented (Nickerson et al., 2014), no attention has been paid to the potential impact of visa processing times and residence status.

The aim of the current study was to examine the rate of and risk factors for PGD in asylum seekers and refugees[1] at different stages of asylum proceedings (waiting for an asylum decision, appeal against a rejected asylum request, temporary residence permit). We investigated the lifetime prevalence of interpersonal losses and traumatic events. Moreover, we determined the rates of PGD (following both Prigerson et al.'s (2009) and DSM-5 definitions) and the two most frequently documented mental disorders among refugees, PTSD and depression. We further investigated loss and trauma exposure and residence status as potential risk factors for PGD.

1. Method

1.1. Participants and procedure

Asylum seekers in Bavaria were recruited for this study. In 2017, about 12% of the asylum applications to Germany were recorded in Bavaria (Bundesamt für Migration und Flüchtlinge [BAMF], 2018b). Overall inclusion criteria were: (a) flight to Germany, (b) age 18 years or older, and (c) informed consent to participate in the study. Exclusion criteria were suicidality, acute psychosis, or cognitive deficits. No participant

had to be excluded for any of these reasons. Five participants had to be excluded due to missing data. Indifference and lack of time were the most frequent reasons for the refusal of participation.

Participants were recruited from one initial reception centre and four decentralized collective accommodations in Bavaria, Germany. Participants were contacted with email distribution lists and posters as well as by going door to door and personally informing the residents with the help of two cultural mediators. The assessment took place in the form of questionnaire-based semi-structured clinical interviews on the premises of these accommodations from December 2017 to July 2018. Those willing to participate were given extensive information about the study aims and procedure. All subjects provided written informed consent before participating in the study. In case of positive screening or high mental distress, participants were informed about treatment and counselling options and referred to appropriate services. The study protocol was approved by the local IRB, and the study was conducted in accordance with the Declaration of Helsinki.

Upon arrival in Bavaria, all participants were at first allocated to an initial reception centre by government authorities. Refugees seeking asylum in Germany are hosted in such government funded temporary accommodations for up to two years (Bundesamt für Migration und Flüchtlinge [BAMF], 2018a). They are free to move around in the community, but not allowed to leave the administrative region. In case of prolonged asylum proceedings or temporary residence permits, refugees are allowed to move to private or government funded collective accommodations (BAMF, 2018a). About 68% of asylum seekers in Bavaria lived in decentralized collective accommodations rather than private accommodations at the end of 2016 (BAMF, 2018a). The total sample of 99 asylum seekers consisted of three groups at different stages of the asylum determination process: 29 individuals who were waiting for their visa decisions, 32 persons who were in appeal against their rejected asylum requests, and 38 persons who had been granted temporary residence permits.

The semi-structured interviews were conducted by trained graduate psychology students ($N = 3$), interpreters were present throughout the study. The interpreters were trained in translating in the refugee mental health context ($N = 5$; Arabic, Farsi, Kurdish). Moreover, the interviewers were trained in the work with refugees and assessment of relevant constructs and were supervised on a regular basis. The interviews lasted on average 60 minutes. Participants received a 10 EUR voucher as financial compensation.

1.2. Measures

Sociodemographic and migration-related information was obtained, including age, gender, ethnicity, education, accommodation, duration of stay in Germany, and language proficiency. Interpersonal loss exposure was assessed with questions of how many cases of death or missing loved ones (Boss, 2004) have occurred within the nuclear family (spouse, child, parent, sibling), among other relatives, and among close friends. The types of losses (i.e. death or missing loved ones) were added up to create indices of the total number of losses of nuclear family members, extended family members, and friends.

Traumatic events experienced across the lifespan were assessed with the 17-item Life Events Checklist (LEC-5; Weathers et al., 2013). A sum score of the number of personally experienced and/or witnessed traumatic events was calculated. The 18-item Traumatic Grief Inventory Self-Report Version (TGI-SR; Boelen & Smid, 2017) was employed to assess PGD symptom severity as well as diagnoses of PGD and PCBD according to Prigerson et al.'s (2009) criteria and the DSM-5, respectively. Participants were asked to consider their most distressing loss and rate the extent to which they experienced grief symptoms during the last month on a 5-point scale (1 = never, 5 = always). Provisional PGD diagnosis was calculated by treating each item rated as ≥ 4 (frequently) as a symptom and then following the diagnostic rule proposed by Prigerson et al. (2009), which requires the endorsement of the B criterion item (separation distress), five C criterion items (cognitive, emotional, and behavioural symptoms), and the E criterion item (impairment). Likewise, PCBD caseness was determined by treating each item rated as ≥ 4 as a symptom endorsed and adhering to the DSM-5 diagnostic rule: endorsement of one B criterion item (yearning or preoccupation), six C criterion items (reactive distress or social/identity disruption), and the D criterion item (impairment). PGD and PCBD diagnoses and a total PGD symptom severity score (range: 18–90) were calculated. In this study, Cronbach's alpha of the total PGD score was .92.

Provisional PTSD diagnosis according to the DSM-5 was measured with the Posttraumatic Stress Disorder Checklist-5 (PCL-5; Weathers et al., 2013). The PCL-5 comprises 20 items rated on a 5-point scale (0 = not at all, 4 = extremely). Provisional PTSD diagnosis was determined as follows: each item endorsed as ≥ 2 (moderately) was regarded as a symptom. In addition, one intrusion item (B criterion), one avoidance item (C criterion), two negative cognitions and affect items (D criterion), as well as two hyperarousal items (E criterion) had to be fulfilled. Moreover, a total PTSD score was computed (range: 0–80). Cronbach's alpha was .88 in this study.

The 9-item Patient Health Questionnaire (PHQ-9; Kroenke, Spitzer, & Williams, 2001) was used to measure depressive symptoms according to the DSM-IV. Items refer to depressive symptoms during the last two weeks and are rated on a 4-point scale (0 = not at all, 3 = nearly every day), yielding score ranges from 0–27. Provisional depression diagnosis was determined with a cut-off score of 10 (Manea, Gilbody, & McMillan, 2015). Cronbach's alpha in the present study was .83.

1.3. Data analysis

All data analyses were carried out with Stata version 13.0 (StataCorp, USA). Differences between the asylum seeker groups in sociodemographic characteristics, loss and trauma exposure, and rates of probable psychiatric diagnoses were computed using χ^2 tests and one-way analyses of variance with subsequent pairwise comparisons if appropriate. A hierarchical regression analysis was performed to investigate the associations between PGD symptom severity and potential predictor variables. In the first step, age, gender, and education were included as demographic characteristics. Total numbers of traumatic events experienced, of lost nuclear family members, of lost extended family members, and of lost friends were entered next. In the final step, the post-migration variables of residence status, symptoms of depression, and PTSD symptoms were included. Residence status was recoded into two dummy variables, whereby 'asylum request in process' served as the reference category. The variance inflation factor (VIF) did not indicate serious multicollinearity among potential predictor variables within both groups (all VIFs were < 2). All tests were two-tailed with α = .05.

2. Results

2.1. Sample characteristics

Sociodemographic characteristics are summarized in Table 1. The total sample was on average 30.12 years old (range: 19–74). Participants were mostly male (67%) and had on average ten years of formal education. The majority of participants had Arabic (45%), Kurdish (32%), and Afghan (15%) backgrounds. Corresponding to the visa processing status, participants with residence permits had stayed significantly longer in Germany than participants waiting for decisions and participants in appeal. Most of the members of the 'waiting for asylum decision' group and nearly half of those in the 'in appeal' group were housed in initial reception centres, while all participants with residence permit status lived in decentralized collective accommodation. Participants with residence permits were more often employed or

Table 1. Sociodemographic characteristics.

Characteristic	Total (N = 99)	Group 1 (n = 29)	Group 2 (n = 32)	Group 3 (n = 38)	Group differences
Female, % (n)	32.3 (32)	31.0 (9)	31.3 (10)	34.2 (13)	$\chi^2 = 0.10$, p = .951
Age in years, M (SD)	30.12 (9.43)	28.62 (6.72)	28.21 (6.94)	32.86 (11.98)	F = 2.78, p = .066
Education in years, M (SD)	9.91 (4.79)	8.52 (5.38)	10.15 (4.15)	10.76 (4.69)	F = 1.90, p = .154
Ethnicity, % (n)					$\chi^2 = 23.76$, p = .003
Arabic	45.4 (45)	24.1 (7)	37.5 (12)	68.4 (26)	
Kurdish	32.3 (32)	55.2 (16)	31.2 (10)	15.8 (6)	
Yazidi	2.0 (2)	6.9 (2)	0.0 (0)	0.0 (0)	
Afghan	15.2 (15)	10.3 (3)	21.9 (7)	13.1 (5)	
Persian	5.1 (5)	3.4 (1)	9.4 (3)	2.6 (1)	
Time in Germany in months, M (SD)	16.56 (12.92)	5.53 (11.20)	15.70 (11.97)	25.71 (6.75)	F = 33.48, p = .001
Accommodation, % (n)					$\chi^2 = 55.12$, p = .001
Initial reception centre	40.4 (40)	89.6 (26)	43.7 (14)	0.0 (0)	
Collective accommodation	59.6 (59)	10.3 (3)	56.2 (18)	100 (38)	
Language proficiency, M (SD)[a]	6.00 (7.02)	1.24 (3.47)	4.80 (5.81)	10.65 (7.21)	F = 22.13, p = .001
Employment/further training, % (n)	48.5 (48)	17.2 (5)	46.8 (15)	73.6 (18)	$\chi^2 = 21.03$, p = .001

Note: Group 1 = asylum request in process, Group 2 = appeal against rejected asylum request, Group 3 = temporary residence permit. X^2 test with df = 2, F-test with df = 96/2. [a] Participants were asked for how many months they have been studying German.

Table 2. Loss and trauma characteristics.

Characteristic	Total (N = 99)	Group 1 (n = 29)	Group 2 (n = 32)	Group 3 (n = 38)
Number of losses, M (SD)	5.67 (6.47)	2.65 (2.34)	3.68 (4.13)	9.65 (8.10)
Type of loss, % (n)				
Nuclear family members	64.6 (64)	72.4 (21)	62.5 (20)	60.5 (23)
Extended family members	89.9 (89)	89.6 (26)	84.3 (27)	94.7 (36)
Friends	88.9 (88)	96.5 (28)	78.1 (25)	92.1 (35)
Number of traumatic events, M (SD)	7.11 (3.53)	6.65 (4.1)	7.40 (3.4)	7.21 (3.2)
Type of traumatic event, % (n)				
Natural disaster	34.3 (34)	51.7 (15)	50.0 (16)	7.9 (3)
Fire or explosion	64.6 (64)	58.6 (17)	65.6 (21)	68.4 (26)
Transportation accident	73.7 (73)	65.5 (19)	78.13 (25)	76.3 (29)
Serious accident	38.4 (38)	27.6 (8)	50.0 (16)	36.8 (14)
Exposure to toxic substance	5.0 (5)	3.4 (1)	3.1 (1)	7.9 (3)
Physical assault	51.5 (51)	41.3 (12)	53.1 (17)	57.8 (22)
Assault with a weapon	46.4 (46)	44.8 (13)	43.7 (14)	50.0 (19)
Sexual assault	6.1 (6)	0.0 (0)	9.4 (3)	7.9 (3)
Other unwanted sexual experience	12.1 (12)	13.8 (4)	15.6 (5)	7.9 (3)
Combat or exposure to war-zone	69.7 (69)	65.5 (19)	37.5 (12)	78.9 (30)
Captivity	45.4 (45)	44.8 (13)	31.2 (10)	57.8 (22)
Life-threatening illness or injury	55.5 (55)	51.7 (15)	50.0 (16)	63.1 (24)
Severe human suffering	74.7 (74)	89.6 (26)	75.0 (24)	63.1 (24)
Sudden violent death	51.5 (51)	44.8 (13)	56.2 (18)	52.6 (20)
Sudden accidental death	51.5 (51)	31.0 (9)	62.5 (20)	50.0 (19)
Serious injury inflicted on someone else	8.1 (8)	6.9 (2)	6.2 (2)	10.5 (4)
Other	25.2 (25)	24.1 (7)	28.1 (9)	23.6 (9)

Note: Group 1 = asylum request in process, Group 2 = appeal against rejected asylum request, Group 3 = temporary residence permit. Traumatic events (personally experienced and/or witnessed) were assessed with the LEC-5 (Weathers et al., 2013).

enrolled in training and achieved higher language proficiency than those in the other two groups (Table 1).

2.2. Loss and trauma characteristics

The majority of participants had experienced interpersonal loss: 92% of all participants reported the loss of at least one loved person (64% loss of a nuclear family member, 89% loss of an extended family member, 88% loss of a friend; Table 2). On average, 5.67 losses were reported (Table 2). Participants with temporary residence permits indicated significantly more losses than those waiting for asylum decisions, t (96) = 4.37, p = .001, and those in appeal, t (96) = 4.98, p = .001. Moreover, all participants had

experienced at least one event that would be considered as potentially traumatic according to DSM-5. Overall, lifetime exposure to traumatic events was high (Table 2), without significant differences between the three groups, F(2, 96) = 0.36, p = .696. Severe human suffering (74%), transportation accidents (73%), and combat or war-zone exposure (69%) were the most frequently reported events by all participants.

2.3. PGD and other mental health outcomes

Table 3 shows findings on the prevalence of probable mental disorders. In total, 20 participants (20%) fulfilled Prigerson et al.'s (2009) PGD criteria on the TGI-SR. 16% met PCBD caseness on the TGI-SR.

Caseness for PGD was met more often than for PCBD, $\chi^2(1) = 44.10$, $p = .001$. The pairwise agreement between PGD and PCBD caseness was substantial (Kappa = 0.77). Further, 45 participants had a provisional PTSD (45%) and 42 a probable depression (42%). Of the 20 participants meeting PGD caseness, 44% had a provisional PTSD, 11% a depression, and 38% both depression and PTSD. Among participants meeting PCBD caseness, 37% suffered from PTSD, 6% from depression, and 31% from both, PTSD and depression. As shown in Table 3, participants with residence permits suffered significantly more often from depression and less often from PGD and PTSD than participants in appeal and participants waiting for asylum decisions.

2.4. Factors predicting symptoms of PGD

Potential risk factors for PGD symptoms were investigated with a hierarchical regression analysis. In the first step, no demographic characteristic was associated with PGD symptoms. Trauma and loss experiences were included in the second step and accounted for 6% of variance in addition to the variance explained by the demographic characteristics. The number of lost nuclear family members emerged as a positive predictor of PGD symptoms (β = .29, $p = .018$). In the final step, residence status, symptoms of depression, and PTSD symptoms were entered in the model, accounting for additional 25% of the variance. As presented in Table 4, in the final model, the number of lost nuclear family members, residence permit, and PTSD symptoms were all significantly associated with PGD symptoms. This final model explained $R^2_{adj} = 33\%$ of the variance in PGD symptoms, $F(11,83) = 3.72$, $p = .001$.

3. Discussion

Despite frequent interpersonal losses in conflict-affected and displaced populations across the globe, the prevalence of pathological grief in the current refugee population in Europe is largely unknown. This study examined the prevalence of PGD in asylum seekers at different stages of asylum proceedings in Germany. We found high rates of provisional

Table 4. Hierarchical regression analysis to predict prolonged grief disorder symptoms (TGI-SR).

Predictor	B(SE)	β	p value
Age	−0.24 (0.23)	−.11	.315
Gender[a]	−1.90 (4.43)	−.04	.669
Education	0.65 (0.38)	.16	.094
Traumatic events	−1.14 (0.63)	−.19	.076
Losses of nuclear family members	3.16 (1.44)	**.23**	**.032**
Losses of extended family members	0.33 (0.47)	.08	.485
Losses of friends	0.54 (0.88)	.06	.467
Residence status[b]			
Appeal against rejected asylum request	−4.52 (4.63)	−.10	.322
Temporary residence permit	−13.19 (5.03)	**−.33**	**.010**
PTSD	0.39 (0.11)	**.36**	**.001**
Depression	0.28 (0.30)	.09	.350

Note: N = 95. PTSD = post-traumatic stress disorder. [a] Coded as '0' male, '1' female. [b] Dummy coded variables, 'asylum request in process' served as the reference category.

PGD, PCBD, PTSD, and depression in all groups. More losses of nuclear family members and PTSD symptoms predicted higher levels of PGD symptoms. Residence permit status was associated with less severe PGD symptoms.

The results of this study indicate a high prevalence of probable PGD among asylum seekers in Germany. Overall, 20% of the participants met the criteria for PGD caseness according to Prigerson et al.'s (2009) criteria and 16% for DSM-5 PCBD. The pairwise agreement between provisional diagnoses of PGD and PCBD was substantial, supporting that the Prigerson and DSM-5 concepts of pathological grief identify very similar diagnostic entities (Boelen, Lenferink, Nickerson, & Smid, 2018; Maciejewski et al., 2016). Yet, this finding may not be generalized to ICD-11 PGD as the prevalence rates for ICD-11 PGD criteria may differ considerably from the other criteria sets (Boelen, Lenferink, et al., 2018; but see Killikelly & Maercker, 2017). Former refugee studies reported higher PGD rates of 31–54% (Craig et al., 2008; Momartin et al., 2004). However, we did not sample exclusively bereaved refugees, and our sample was likely more heterogeneous with regard to the time since loss, which could explain the lower rate in the present study. The prevalence rates of probable PGD differed between the three study groups. Among asylum seekers with processing and appeal status, provisional PGD and PCBD rates were significantly higher than in participants with residence permits. As

Table 3. Prevalence of probable psychiatric diagnoses.

	Total sample (N = 99)	Group 1 (n = 29)	Group 2 (n = 32)	Group 3 (n = 38)	Group differences
Diagnostic status, % (n)					
PGD	20.2 (20)	20.7 (6)	37.5 (12)	5.2 (2)	$\chi^2 = 15.56$, $p = .001$
PCBD	16.1 (16)	20.7 (6)	25.0 (8)	5.2 (2)	$\chi^2 = 8.95$, $p = .012$
PTSD	45.4 (45)	55.1 (16)	59.3 (19)	26.3 (10)	$\chi^2 = 9.21$, $p = .010$
Depression	42.4 (42)	31.0 (9)	34.3 (11)	57.8 (22)	$\chi^2 = 6.11$, $p = .047$

Note: Group 1 = asylum request in process, Group 2 = appeal against rejected asylum request, Group 3 = temporary residence permit. PGD = prolonged grief disorder according to the Prigerson et al. (2009) criteria, PCBD = persistent complex bereavement disorder, PTSD = post-traumatic stress disorder. X^2 test with $df = 2$. Percentage of positive cases was defined as participants fulfilling the diagnoses based on the TGI-SR or PCL-5 or participants with a symptom score above the PHQ-9 cutoff.

expected, the rates of asylum seekers with processing and appeal status were higher than those in earlier studies with bereaved individuals after mostly non-violent death causes (9.8%; Lundorff et al., 2017), while the prevalence among those with residence permit status was relatively similar to that of a representative German sample (3.7%; Kersting, Brähler, Glaesmer, & Wagner, 2011). Also, asylum seekers with residence permit status suffered more frequently from depression than those processing and appeal status, while the latter two groups displayed significantly higher rates of PGD, PCBD, and PTSD.

There might be different explanations for the group differences in probable mental disorder rates. First, a discussion of traumatic and interpersonal loss experiences during asylum hearings may exacerbate trauma- and bereavement-related psychological distress in individuals waiting for asylum decisions and those in appeal against rejected asylum claims (Herlihy & Turner, 2007). Second, the lower PGD and PTSD rates of participants with temporary residence permits may reflect recovery from conflict-related PGD and PTSD. Longitudinal studies on PTSD after war and displacement have reported gradual decreases in PTSD symptoms over short to medium follow-up periods (Mollica et al., 2001; Weine et al., 1998). On the other hand, a review of long-term refugee mental health has revealed that depression seems to be more closely related to current post-migration stressors than PTSD (Bogic, Njoku, & Priebe, 2015). Prolonged social isolation, unemployment, and persistent bad living conditions might have increased feelings of helplessness and lack of perspective and thus depressive symptoms among individuals holding residence permits. Nevertheless, the results are in line with findings on the negative impact of prolonged asylum processes (Laban et al., 2004, 2008), rejected asylum claims (Silove et al., 2007), and temporary visas (Nickerson, Steel, Bryant, Brooks, & Silove, 2011) on various mental health outcomes, despite differences in specific psychological domains depending on the residence status (Heeren et al., 2014). In addition, residence permit status was associated with lower PGD symptom levels, even after controlling for traumatic and loss experiences. Fear about the outcome of the asylum process may have thus exacerbated PGD symptoms in the other two groups. Overall, the results of this study indicate a high prevalence of stress-related disorders among asylum seekers in Germany, supporting that restrictive asylum procedures may lead to ongoing distress by creating a climate of fear and uncertainty (Silove, Steel, & Mollica, 2001).

Participants in this study reported a high exposure to traumatic events and interpersonal losses. They personally experienced and/or witnessed on average six to seven traumatic events, which is in line with the recent results from another study with asylum seekers in Germany (Kaltenbach, Härdtner, Hermenau, Schauer, & Elbert, 2017). Consistent with studies of PGD after war and displacement, the number of traumatic events experienced did not impact the severity of PGD (Morina et al., 2010; Stammel et al., 2013). This finding also indicates that PGD symptom severity is independent of overall trauma exposure, especially as the herein employed LEC-5 (Weathers et al., 2013) accounted for witnessing traumatic losses. Moreover, the rate of lost loved persons was very high. In an Iraqi asylum seeker sample in the Netherlands, the majority has suffered the loss of family members (87%), and friends (49%; Hengst et al., 2018). Thus, interpersonal loss seems to be a major stressor in the current refugee population in the EU. Furthermore, the total number of nuclear family members lost emerged as a risk factor for PGD. Although most previous studies with conflict-affected and displaced populations indicated that multiple losses do not predict PGD, these studies did not differentiate the number of losses along the relationship with the deceased (Morina et al., 2010; Schaal et al., 2010; Stammel et al., 2013). However, our results suggest that bereavement overload (Neimeyer & Holland, 2006) depends on the familial relationship and may then constitute an important risk factor for the development of PGD among refugees.

Besides several strengths of the present study, such as taking residence status into account, and the application of semi-structured interviews, several limitations need to be acknowledged. First, we did not employ a random sampling approach. Yet, our sample was quite comparable to the refugee population in Germany in terms of demographics, especially as we recruited participants from diverse cultural backgrounds. In 2017, most asylum claims were made by Arabic and Kurdish refugees from Syria (25%), followed by Iraq (11%) and Afghanistan (8%; BAMF, 2018b). About 60% of asylum seekers were men (BAMF, 2018b). Second, the size of the three subsamples was rather low and the number of predictor variables in the multiple regression analysis was high. This limitation needs to be considered for any interpretation of the results. One might suspect some kind of influence of cultural variables, but the small sample size did not allow for comparisons between different ethnic backgrounds or languages spoken. Third, potential bias due to social desirability or assumed connections to asylum hearings cannot be excluded, despite extensive information about the study aims before participation. Finally, this study was

cross-sectional, so the development of grief symptoms across the course of asylum proceedings remains to be unknown.

In conclusion, this study points to the high rate of PGD in asylum seekers in Germany. Therefore, problematic grief needs to be considered in health care policies for the current refugee population in Europe. Although screening instruments for the most common mental disorders have been recently validated among asylum seekers (e.g. Kaltenbach et al., 2017), a short prolonged grief screening is lacking. The inclusion of a grief screening in the initial medical examination after arrival might be helpful to refer asylum seekers to more extensive evaluations. Moreover, future work on refugees should examine the long-term development of grief trajectories. The development of grief-specific interventions for asylum seekers might be needed not only to improve psychological functioning but also to foster social and economic integration into the host society (Schick et al., 2016).

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Note

1. Asylum seekers are waiting for asylum request decisions or are in appeal against rejected asylum claims. Refugees are holding temporary or permanent residence permits. Although we acknowledge that the experience of asylum seekers and refugees may differ considerably, the term 'asylum seeker' will hereafter be used to represent both asylum seekers and refugees, in order to facilitate reading.

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