



**HAL**  
open science

## Association between uncertainty regarding right-to-stay and mental health in unaccompanied and separated migrant children (UASC) reaching adulthood: findings from France

Joanna Norton, Catherine Gandubert, Isabelle Chaudieu, Sonia Pellissier, Sydney Gaultier

### ► To cite this version:

Joanna Norton, Catherine Gandubert, Isabelle Chaudieu, Sonia Pellissier, Sydney Gaultier. Association between uncertainty regarding right-to-stay and mental health in unaccompanied and separated migrant children (UASC) reaching adulthood: findings from France. *Social Psychiatry and Psychiatric Epidemiology*, 2023, 10.1007/s00127-023-02442-y. hal-04117564

**HAL Id: hal-04117564**

**<https://hal.science/hal-04117564v1>**

Submitted on 5 Jun 2023

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

**Association between uncertainty regarding right-to-stay and mental health in unaccompanied and separated migrant children (UASC) reaching adulthood: findings from France.**

Joanna Norton<sup>a,\*</sup>, Catherine Gandubert<sup>a</sup>, Isabelle Chaudieu<sup>a</sup>, Sonia Pellissier<sup>b</sup>, Sydney Gaultier<sup>b,c</sup>

<sup>a</sup> University of Montpellier, Inserm U1298, France

<sup>b</sup> Inter-University Laboratory of Psychology (LIP/PC2S), University Savoie Mont-Blanc, University Grenoble Alpes, France

<sup>c</sup> University Hospital of Lausanne, Switzerland

\*corresponding author

Joanna.norton@inserm.fr

ORCID: 0000-0002-2634-1052

Inserm Unit 1298

Institute of Neurosciences of Montpellier

Hôpital La Colombière Pavillon 42

39 avenue Charles Flahault

34093 Montpellier Cedex 5

France

4033 words

4 tables, 1 figures

## **Abstract**

**Purpose:** There is substantial evidence suggesting high levels of mental health problems in unaccompanied and separated children (UASC). However, there is less focus on the first years of adulthood characterised by increased vulnerability and fear of deportation. We aim to describe the mental health of UASC on reaching adulthood, and how this is affected by uncertainty regarding their right-to-stay in France.

**Methods:** 110 youth aged 18-22 were recruited via child protection reception centres. We administered the Patient Health Questionnaire somatic (PHQ-15), anxiety (GAD-7) and depression (PHQ-9) modules, the Post-Traumatic Stress Disorder Checklist (PCL-5) and Connor-Davidson Resilience Scale (CD-RISC-10). Logistic regression analysis was performed with the dependent variable, a secure (versus uncertain) situation defined as (i) detaining a residence permit and being in school, apprenticeship or salaried job, or (ii) waiting for residence permit whilst occupying a salaried job.

**Results:** Of the sample, 18.4% reached criteria (score $\geq$ 10) for probable somatic disorder, 17.6% for anxiety and 28.7% for depression; 41.8% were in an uncertain situation. Uncertainty was associated with higher anxiety ((OR per Interquartile range (95%CI), 1.77 (1.05-2.98)) and post-traumatic stress symptoms (2.05 (1.06-4.00)), lower resilience (0.50 (0.27-0.91)), and participants rating their anxiety ( $p=0.02$ ) and depressive symptoms ( $p=0.003$ ) as more severe since reaching adulthood.

**Conclusions:** Our findings suggest uncertainty regarding right-to-stay is associated with increased mental health symptoms, specifically anxiety and trauma-induced stress, thereby highlighting the vulnerability of UASC in their first years of adulthood. This calls for greater support during this transition period with regular symptom monitoring for timely psychological interventions.

250 words

Keywords: unaccompanied and separated children, transition to adulthood, depression, anxiety, trauma, vulnerability

## Introduction

Wars, political conflict, violence and lack of opportunities contribute to the continuous arrival of migrants to the borders of European countries. In 2020, minors represented almost one-third of all first-time asylum-seekers and close to 50% arrived unaccompanied or separated [1]. Their country of origin, migration journey and experiences vary substantially from one host country to another [2]. Most unaccompanied and separated children (UASC) migrating from Sub-Saharan African countries follow the Central Mediterranean migration route which is marked by high levels of abuse, trafficking and exploitation [3]. UASC, when recognised as minors, fall under the United Nation's Child Protection Act, with all signatory countries legally bound to offer them protection, care and access to education [4]. This has led to the opening of specific reception and care facilities. The planning and preparation of the transition to adulthood, when protection under this law ends, is of crucial importance [5-7].

With the administrative importance of the age of 18, UASC experience an accelerated and often early transition to adulthood. This is of two types, with a life transition involving complex developmental changes, alongside a legal transition to a new and often precarious status, as highlighted in the UNHCR report entitled *'Unaccompanied and separated asylum-seeking and refugee children turning eighteen: what to celebrate?'* [6]. Country-specific and individual situations mean that whilst some youth may rapidly gain independence and right-to-stay, many become trapped in endless administrative procedures with protracted periods of waiting and uncertainty. This can lead to 'appeal rights exhaustion', with youths disengaging from all statutory services and living illegally to avoid forced return to country of origin. Yet, despite the vulnerability of youth in this crucial period, this is one of the least studied periods in the life course of migrants [8].

UASC face many adversities, before, during and after their migration journey [9]. There is now evidence highlighting the high levels of psychological distress, in particular post-traumatic stress symptoms (PTSS) or disorder (PTSD) experienced by UASC [10-13]. A systematic review of 47 studies

reported considerably higher prevalence rates for a range of mental disorders in migrant minors compared to the general population, with however wide variations between studies. Up to a third were affected by depression (10.3% to 32.8%), or anxiety (8.7% to 31.6%) and up to half (19.0% to 52.7%) by PTSD. Rates were particularly high when restricted to unaccompanied minors [10]. These figures are to compare with worldwide childhood and adolescent prevalence rates estimated at 2.6% (95%CI: 1.7-3.9) for depression and 6.5% (95%CI: 4.7-9.1) for anxiety [14], and with a 7.8% prevalence rate for PTSD by age 18 [15].

Rates in UASC in their first years of adulthood are seldom reported, as studies either focus on minors or include wider adult age groups [16-18]. Several longitudinal studies have examined change in mental health of UASC reaching adulthood according to right-to-stay in the host country and the asylum process [19-23]. Evidence from these studies conducted in Norway [20,21], Holland [19], Belgium [23] and Germany [22], with UASC originating mainly from Asia [20-23] suggests that overall the high level of psychological distress on arrival stays relatively unchanged over the short-term (2 years). However, a higher age at arrival [24], low social support and poor living arrangements [20,25], and above all rejection of asylum status [20,22] have been found to negatively affect their mental health trajectory. In addition, an increase in daily stressors is reported over time, especially new stressors such as discrimination, missing family, impact of age assessment and homelessness are concentrated around the pivotal age of 18 [23]. This is in keeping with a dose-response relationship established between cumulative trauma and PTSS [26,27]. In a review of the impact of traumatic refugee experiences on the mental health of UASC, adolescence and being female were found to considerably increase the risk of psychiatric disorders, namely depression, anxiety and PTSD [12]. Furthermore, a recent study of adolescent refugees and asylum-seekers (age 14-21) in Germany found stressful life events, female gender and fear of deportation to be associated with increased mental distress [13]. Despite evidence showing increased vulnerability of UASCs on reaching adulthood with a deleterious effect on their mental health, this has seldom been explored for specific mental disorders using standardised and validated research instruments.

The impact of reaching adulthood for UASC varies from one European country to another. Whereas in some countries, there are no significant changes on reaching 18 within the asylum-seeking process, in others such as France, there is 'little to celebrate' [6]. In France, UASC fall under the responsibility of the local Child Protection Services (CPS) who are responsible for making institutional care arrangements, through a network of child protection reception centres that provide accommodation, and access to education, legal help and health care [28,29]. UASC usually apply for a temporary residence permit (valid up to 4 years) rather than asylum. At age 18, child protection ends and youth fall under state law. However, some youth obtain a 'Young Adult Contract' (YA-contract), a form of 'bridging support' which provides an 'integration pathway' into education and the labour market and thereby extends child protection rights. It appears there are no clearly defined criteria for obtaining these contracts, but their renewal (possible up until age 21) often depends on successful education and/or employer appreciation [6]. Furthermore, YA-Contracts [30] as well as care arrangements [31] are financed at the local level and there can be significant disparities between areas.

Research on UASC in France [11] is very limited. France differs from many other European countries in attracting UASC from French-speaking West African countries travelling the highly dangerous Central Mediterranean migration route [3]. Yet, most research carried out to date has been in host countries with different reception and resettlement schemes with UASC from Asian, East African and European origin. Moreover, few have focused specifically on the first years of adulthood, examining individual mental health disorders using standardised research instruments. In the present cross-sectional study including 110 youth aged 18 to 22, we aimed to describe the mental health, trauma and resilience of unaccompanied migrant youth in their first years of adulthood, using standardised and validated research instruments. In addition, we sought to investigate the association between uncertainty regarding right-to-stay and mental health. We

hypothesized that youth in an uncertain situation would be more likely to present mental health symptoms.

## **Materials and methods**

### *Study setting and participants*

The study was carried out in three French cities: Chambéry, Montpellier and La Rochelle. Participants were recruited between September 2019 and September 2020. We included: youth between 18 and 22, who no longer benefited from a YA-contract, who arrived in France as UASC, were registered with the CPSs and spoke sufficiently good French to participate. Youth meeting these criteria and for whom a contact number was still available were identified and contacted by carers at the child reception centres (psychologists, social workers, volunteer helpers, etc.). They were given a brief description of the study and invited to contact by phone the study coordinator. Upon acceptance and prior to the interview, participants read the study information sheet and signed an informed consent form. The study was approved by the ethics committee of the University of Savoie-Mont Blanc (ref. CEREUS 20118-22). Less than five youth refused to participate once briefed about the study. The sample size was 110 participants.

### *Measures*

All questionnaires and scales were administered at a single time-point by eight research assistants trained in interview techniques. After questions on socio-demographics, migration pathway, previous living conditions in the CPS centre, current situation, support network and difficulties encountered during their transition to adulthood, the following validated scales were administered:

-The Patient Health Questionnaire 15-item somatoform module (PHQ-15), 7-item anxiety module (GAD-7), and 9-item depression module (PHQ-9) [32].



-The Life Events Checklist for DSM-5 (LEC-5) which screens for 15 lifetime potentially traumatic events [33].

-The 20-item PTSD Checklist for DSM-5 (PCL-5) which assesses PTSS or PTSD experienced in the past month [34].

-The 10-item Connor-Davidson Resilience Scale (CD-RISC-10) exploring resilience over the past month [35,36].

On completion of each of the PHQ modules and PCL-5, participants were asked in a single question to give a rating of the severity of their symptoms since reaching adulthood (no change, more severe, less severe).

### *Study variables*

For the three PHQ modules, categorical variables were constructed applying the widely used 10+ cut-off threshold for probable symptomatology [37-39]. DSM-5 major depression was also reported. Given that the PHQ-9 has failed to show measurement invariance in asylum-seeking populations, we also considered the scores as continuous variables [40]. The dependent variable, a secure (versus uncertain) administrative situation was defined as (i) having obtained a residence permit and being in school, apprenticeship or a salaried job, or (ii) applied for residence permit whilst occupying a salaried job.

### *Statistical analysis*

The sample was described using percentages for categorical variables and the median (range) for continuous variables. The Chi<sup>2</sup> test for categorical variables and Mann-Whitney test for continuous variables were used to study associations between socio-demographic variables and uncertainty. For the associations between mental health variables and uncertainty, we used logistic regression models, adjusted for age and study centre. Linearity of continuous variables with the outcome was verified. Significant associations were further adjusted for the following five variables

associated with uncertainty ( $p < 0.10$ ), and not entering into its definition: country of origin, reason for leaving: family conflict/abuse, contact with family, visit to psychologist during child protection, having a partner. Adjustment variables were entered one-by-one due to the small sample size. Results were expressed as odds ratios (OR) with 95% confidence intervals (95%CI), per interquartile range increase for continuous variables, for comparability purposes. The threshold for statistical significance was set at  $p < 0.05$ . Analyses were performed using SAS EG 7.15 (SAS Institute, Inc. Cary, North Carolina).

## **Results**

### *Socio-demographics*

Of the participants, median age at interview was 19.7 years (range: 18.1-22.8). The majority (92.7%) were male and originated from Africa (80%), mainly Guinea (36.4%), Ivory Coast (19.3%), Mali (15.9%) and Congo (13.6%). Two-thirds (68.2%) of the participants had temporary residence status (Table 1).

### *Migration background and child protection*

Approximately half of the participants (51.8%) decided to leave their home country alone without their family knowing, 17.3% warned their family and 12.7% got their approval; for the remaining 18.2%, their family had decided for them. The main reasons for leaving were: family conflict or abuse (43.6%), personal choice (36.4%), persecution or war (16.4%), economic problems (14.5%), abandoned by parent(s) (13.6%), and death of parent(s) (7.3%) (Percentages do not add up as 41% of participants gave more than one reason). One third (32.7%) declared that they sometimes or often regretted leaving. Contact with family members ranged from never (15.4%), to rarely (15.6%), occasionally (24.6%), and regularly with weekly contacts (45.6%).

As UASC, 85.5% remained in the same child protection centre where initially placed. During their stay, 57.3% saw a psychologist at least once, of which 79% were offered psychological care. The types of difficulties reported were: uncertainty about the future (18.6%), separation from family (15.1%), feeling lonely (14.3%), pressure to succeed (12.3%), not able to speak French (10.4%), living conditions (9.3%), not able to express feelings (8.2%), cultural differences (7.7%), and a feeling of injustice and insufficient welcome by host country (4.1%) (Percentages do not add up as more than one type of difficulty could be reported). Globally, the participants felt their carers at the child protection centre understood their difficulties (80.9%) and felt satisfied with the care they received (75.5%).

#### *Transition to adulthood and mental health*

When asked, at the time of the interview, how they had felt during the first month after leaving child protection care, 61.5% of the participants declared they had felt less well than before; whereas only 17.7% rated their current wellbeing as worse than when they were minors. At the time of the interview, 18.4% reached criteria for a probable somatic disorder, 17.6% for anxiety and 28.7% for depression (Table 2). The most frequent (>25%) reported personally-experienced stressful life-events were: physical assault (66.1%), witnessing the sudden and unexpected death of a close family member/friend (63.3%), assault with weapon (47.7%), captivity (45.9%), transportation accident (35.5%), witnessing violent death (34.9%), combat or exposure to a war-zone (29.6%), and life-threatening illness or injury (27.5%). For those experiencing a traumatic event, the median PTSS score was 21 (IQR: 18) and 26.4% met criteria for DSM-5 PTSD. With respect to symptom change since reaching adulthood, 66% reported feeling less severe PTSS, and 30%, 40% and 37.3% less severe somatic, anxiety and depressive symptoms, respectively (Figure 1).

#### *Uncertain situation and mental health*

Of the sample, 41.8% were in an uncertain situation, as defined in the study. They were younger ( $p=0.01$ ), more often of African origin ( $p=0.01$ ), less likely to have benefited from a YA-contract ( $p=0.003$ ), with lower income ( $p<0.0001$ ) and living in more precarious housing ( $p<0.001$ ) (Table 2). They were also more likely to have no or little contact with their family (28.3% versus 6.3% in a stable situation,  $p=0.02$ ) and to have seen a psychologist during child protection (69.6% versus 48.4%,  $p=0.03$ ). Although borderline significant, a higher proportion of those in an uncertain situation migrated because of family conflict/abuse (54.5% versus 35.9%,  $p=0.06$ ) and a lower proportion had a partner (26.9% versus 42.2%,  $p=0.08$ ).

Anxiety symptoms increased the odds of being in an uncertain situation (OR per IQR increase (95%CI): 1.77 (1.05-2.98)). This was also the case for PTSS total score (2.05 (1.06-4.00)). Similar magnitudes of associations were found for the different PTSS sub-scales but were borderline or not significant. The odds of uncertainty decreased by a factor of two in youth showing higher resilience (0.50 (0.27-0.91)). Youth affected in their daily functioning by PHQ mental health symptoms were more likely to be in an uncertain situation ( $p=0.04$ ) (Table 2). Significant associations were further adjusted for country of origin, migrating because of family conflict/abuse, contact with family, visit to psychologist during child protection and having a partner, each entered separately into the models. Findings were unchanged for anxiety and resilience. However, for PTSS, the association no longer reached significance when adjusted for contact with family and became borderline significant when adjusted for seeing a psychologist (Table 4). Regarding uncertainty and subjective change in symptom severity, we observed a significant trend for anxiety ( $p=0.02$ ) and depressive symptoms ( $p=0.003$ ), with participants in an uncertain situation being more likely to consider their symptoms as more severe since reaching adulthood (Table 3).

## **Discussion**

### *Frequency of mental health symptoms*

In agreement with elsewhere [10,12], our findings highlight the high frequency of mental health symptoms in youth who arrived as UASC. For instance, the proportion with a somatic symptom score  $\geq 10$  was approximately twice as high as in a normative population of men aged 18-39 [41]. For probable PHQ anxiety and depression, rates were more than four times as high as in normative samples of men aged 18-39 for anxiety [42] and 14-24 for depression [43]. The PTSS score in our sample was considerably higher than in samples of undergraduate students either self-evaluated as having experienced a “very stressful life-event” (mean 15.4 (sd. 14.7)) [34] or when referring specifically to their most distressing experience (29.9 (17.7) and 20.4 (16.7) in the English and French sub-samples, respectively) [44].

Comparison with other studies of UASC in the first years of adulthood is limited, as few have focused specifically on the 18-20 age group (extended to 22 in our study to take into account the YA-contract). Of those that span both adolescence and early adulthood [16,13,20,22,18], mental health problems are seldom reported by age group. Furthermore, the quality of evidence is considered to be low due to small convenience sampling [10]. In one study, 81.4% of highly selected UASC around age 18 reached criteria for provisional depression [13]. On the other hand, recent aggregated data from surveys of general population refugee and asylum-seekers in Germany yielded an overall prevalence of PHQ-9 depression of 30.7%, comparable to the prevalence of 28.7% in our study [17]. Despite some controversy with one study reporting a reduction in psychological distress over a one-year follow-up of both accompanied and unaccompanied migrant minors [22], most studies report no significant change as measured with different versions of the Hopkins Symptom Checklist [19-21,23]. This suggests that mental health problems in UASC are likely to be chronic and persistent in the short-term. In a longitudinal study of 47 UASC examining changes in depression, anxiety, externalizing symptoms and PTSS, no changes were observed in the short-term (two-years post-arrival mean age: 16.5 (sd. 1.6)) or, except for depression, in the long-term five years after arrival (mean age 20.0 (sd. 1.6)) [24].

Although we have no comparable data before and after reaching adulthood, a majority of the participants in our study did not report a worsening of symptoms. On the other hand, compared to before, nearly two-thirds reported feeling less well during the first month after reaching age 18, whereas only a small minority reported feeling less well at the time of the study. Reaching age 18 may be more of a milestone in some countries than in others, depending on the change in legal status. Although this is delayed in the case of a YA-contract, in France at age 18, legal responsibility for UASC is transferred from the local level to the state. Once reaching this age, a resident permit is more difficult to obtain whilst being a prerequisite for accessing work and staying in the country. This may explain the increased vulnerability of UASC in the first month of adulthood, with their stay in the child protection centre reaching an end, leading also to a separation from their main carers and trusted persons. However, recall bias could contribute to these findings, as youth were asked to remember how they had felt as far as four years back (for the first month of adulthood) and more (as a minor). Improvement in subjective well-being since reaching adulthood could be overestimated, especially in youth in a secure situation. Indeed, recalling (i) how they had felt as minors brings them back to their migration journey and arrival in the host country, and (ii) how they had felt the first month of their majority, to the end of child protection.

#### *Uncertainty and mental health*

Our findings suggest uncertainty regarding right-to-stay is associated with anxiety and PTSS, but not depressive or somatic symptoms. In migrant minors, the link between right-to-stay, social support and psychological well-being, especially in those unaccompanied, has been previously reported [26]. Jakobsen et al. examined levels of psychological distress assessed using the HSCL-25 and Harvard Trauma Questionnaire in a 2.5 follow-up study of unaccompanied migrant youth spanning adolescence and early adulthood. Although psychological distress did not change over time, it was found to be negatively affected by low support and refusal of asylum [20]. The link between decision on asylum status and psychological distress has been confirmed since [22]. In a cross-

sectional study of unaccompanied asylum-seeker and refugee adolescents (mean age 18.6 (1.51)), fear of deportation was associated with increased mental distress [13]. However, this is to be distinguished from an objective measure of uncertainty regarding right-to-stay and can be confounded by anxiety symptoms. So far, few studies have investigated the association between asylum status and specific psychiatric disorders or symptom dimensions such as anxiety and depression. A recent retrospective study found no association between the length of the asylum process as a proxy for accumulated stress and depression; however, the sample was restricted to refugees who had been granted protection [18]. On the other hand, they reported a healing effect of time over the long-term (10 years) with residence-time negatively associated to depression.

Regarding trauma, a correlation has been reported between age of UASC and PTSS [27], suggesting that approaching the age of 18 with potential worry about the future may have an impact on PTSS. A further study evidenced an increase in daily stressors in UASC since their arrival in the host country, in particular experiences related to discrimination but also dissatisfaction with educational situation, missing family, the impact of age assessment, homelessness and being forcibly and repeatedly moved, which all contributed to the increase in PTSS [23]. Indeed, transition to adulthood -with the paradox of protection as an UASC followed in many countries by a form of 'rejection' on reaching adulthood- can in itself constitute a new type of trauma [26]. Our findings suggest that being in an uncertain situation may exacerbate symptoms that may otherwise have remained stable or receded.

Our hypothesis was that youth in an uncertain situation would be more likely to present mental health symptoms. However, this association can be explained bi-directionally. Uncertainty may trigger mental health problems, but chronic underlying anxiety and PTSS could also prevent youth from reaching a secure situation. Uncertainty would in turn exacerbate symptoms, both measured by validated research instruments (for anxiety and PTSS) and self-evaluated in terms of subjective change over time (for anxiety and depression). The direction of the association is particularly difficult to disentangle for resilience. Uncertainty may have hindered the development or

maintenance of resilience, just as a lack of resilience may have triggered a succession of events leading to an uncertain situation. Research on resilience in UASC and adult migrants is scarce, and to our knowledge, no studies have measured this concept using standardised research instruments. Interestingly, the level of resilience in our study (mean (sd.): 29 (6.2)) is very similar to that reported for the 18-24 year age group in the general population validation study (mean (sd.): 29.5 (5.4)) [35].

### *Limitations*

The main limitation was the representativeness of our sample. Regarding the choice of the three cities, the profiles of UASC under the responsibility of the three CPSs are unlikely to differ. Indeed, legislation ensures all CPSs participate in the reception of UASC, meaning that UASC seldom remain at their point of arrival in the country [29]. On the other hand, participants were selected indirectly through their former carers, which may have introduced bias in the estimations of mental health problems. Those in a secure situation may have been easier to reach leading to an underestimation of prevalence rates. On the other hand, the carers felt that those who kept in touch were often in acute need of support and guidance with a strong emotional attachment. The main variable, uncertainty, lacks precision with respect to the duration of residence status and the length of the waiting period for pending cases. Another important limitation of our study was its cross-sectional design. This led to ambiguity as to the nature (temporary versus enduring) of mental health symptoms and the direction of associations between uncertainty and mental health. Recall bias is another limitation as the participants were asked to rate their change symptoms since reaching adulthood, as well as the recall how they felt in the first month of leaving child protection, compared to as far as four years earlier.

### *Strengths*

A strength of this study is the use of standardised and validated research instruments. The choice of the widely used PHQ allowed us to compare our frequency rates to those established for



normative populations. Given the limited knowledge of written French by some of the participants, a research assistant administered the self-report questionnaires during a 1.5-hour interview. This contributed to the good quality of our data with very few missing values. A further strength is the sample size, which can be considered relatively large given the difficulties of reaching young adult UASC no longer under child protection [4]. Our study is original as it is one of the few studies emanating from France and includes a majority of UASC from West Africa.

To conclude, this study is one of the first to report on the mental health of unaccompanied migrant youth in France, focusing on the critical two-year period since reaching adulthood, and on the association between uncertainty regarding right-to-stay and specific mental health symptoms. Our findings confirm the high levels of mental health symptoms in this population and suggest that uncertainty is associated with higher anxiety and PTSS, less resilience and a worsening of subjective anxiety and depressive symptoms. UASC need to be better prepared and accompanied during this transition period, with regular assessments of mental health symptoms in order to apply timely psychosocial interventions [45]. This represents a particular challenge given that many UASC reach their host country close to age 18.

### **Acknowledgments**

We are very grateful to the staff of the child protection services and child reception centres who helped us recruit the participants. We thank the participants for their time given to the study.

### **Funding**

None

### **Author contributions**

SG designed the study. JN and CG provided methodological expertise. CG coordinated data collection in two of the study centres and managed the data. JN analysed the data and drafted the manuscript. SP and IC provided scientific expertise on trauma, stress and resilience. All authors interpreted the data, participated in the critical revision of the manuscript and approved the final version.

**Conflict of interest**

The authors declare that they have no conflict of interests.

## References

1. Eurostat (2021) Asylum statistics. [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Asylum\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Asylum_statistics).
2. UNHCR (2019) Refugee and Migrant Children in Europe, Accompanied, Unaccompanied and Separated. Overview of Trends January to December 2019.
3. UNICEF (2017) Harrowing Journeys: children and Youth on the move across the Mediterranean Sea, at risk of trafficking and exploitation.
4. UN (1989) United Nation's Convention on the Rights of the Child.
5. Allsopp J, Chase E (2019) Best interests, durable solutions and belonging: policy discourses shaping the futures of unaccompanied migrant and refugee minors coming of age in Europe. . *Journal of Ethnic and Migration Studies* 45 (2):293-311
6. UNHCR (2014) Unaccompanied and separated asylum-seeking and refugee children turning eighteen: what to celebrate? Strasbourg, France
7. Wade J (2011) Preparation and transition planning for unaccompanied asylum-seeking and refugee young people: A review of evidence in England. *Children and Youth Services Review* 33:2424-2430
8. Chase E (2020) Transitions, capabilities and wellbeing: how Afghan unaccompanied young people experience becoming 'adult' in the UK and beyond. *Journal of Ethnic and Migration Studies* 46 (2):439-456
9. Smid GE, Lensvelt-Mulders GJ, Knipscheer JW, Gersons BP, Kleber RJ (2011) Late-onset PTSD in unaccompanied refugee minors: exploring the predictive utility of depression and anxiety symptoms. *J Clin Child Adolesc Psychol* 40 (5):742-755. doi:10.1080/15374416.2011.597083
10. Kien C, Sommer I, Faustmann A, Gibson L, Schneider M, Krczal E, Jank R, Klerings I, Szelag M, Kerschner B, Brattstrom P, Gartlehner G (2019) Prevalence of mental disorders in young refugees and asylum seekers in European Countries: a systematic review. *Eur Child Adolesc Psychiatry* 28 (10):1295-1310. doi:10.1007/s00787-018-1215-z
11. Monpierre O, Baudino P, Rio-Rene P, Maurice S, Malvy D, Receveur MC (2016) [Global health of unaccompanied refugee minors in Gironde (France) between 2011 and 2013]. *Bull Soc Pathol Exot* 109 (2):99-106. doi:10.1007/s13149-016-0476-3
12. von Werthern M, Grigorakis G, Vizard E (2019) The mental health and wellbeing of Unaccompanied Refugee Minors (URMs). *Child Abuse Negl* 98:104146. doi:10.1016/j.chiabu.2019.104146
13. Hohne E, Banaschewski T, Bajbouj M, Boge K, Sukale T, Kamp-Becker I (2021) Prevalences of mental distress and its associated factors in unaccompanied refugee minors in Germany. *Eur Child Adolesc Psychiatry*. doi:10.1007/s00787-021-01926-z

14. Polanczyk GV, Salum GA, Sugaya LS, Caye A, Rohde LA (2015) Annual research review: A meta-analysis of the worldwide prevalence of mental disorders in children and adolescents. *J Child Psychol Psychiatry* 56 (3):345-365. doi:10.1111/jcpp.12381
15. Lewis SJ, Arseneault L, Caspi A, Fisher HL, Matthews T, Moffitt TE, Odgers CL, Stahl D, Teng JY, Danese A (2019) The epidemiology of trauma and post-traumatic stress disorder in a representative cohort of young people in England and Wales. *Lancet Psychiatry* 6 (3):247-256. doi:10.1016/S2215-0366(19)30031-8
16. Gimeno-Monterde C, Gomez-Quintero JD, Aguerri JC (2021) Unaccompanied young people and transition to adulthood: Challenges of child care services. *Children and Youth Services Review* 121:105858
17. Hoell A, Kourmpeli E, Salize HJ, Heinz A, Padberg F, Habel U, Kamp-Becker I, Hohne E, Boge K, Bajbouj M (2021) Prevalence of depressive symptoms and symptoms of post-traumatic stress disorder among newly arrived refugees and asylum seekers in Germany: systematic review and meta-analysis. *BJPsych Open* 7 (3):e93. doi:10.1192/bjo.2021.54
18. Oppedal B, Ramberg V, Roysamb E (2020) The asylum-process, bicultural identity and depression among unaccompanied young refugees. *J Adolesc* 85:59-69. doi:10.1016/j.adolescence.2020.07.007
19. Bean TM, Eurelings-Bontekoe E, Spinhoven P (2007) Course and predictors of mental health of unaccompanied refugee minors in the Netherlands: one year follow-up. *Soc Sci Med* 64 (6):1204-1215. doi:10.1016/j.socscimed.2006.11.010
20. Jakobsen M, Meyer DeMott MA, Wentzel-Larsen T, Heir T (2017) The impact of the asylum process on mental health: a longitudinal study of unaccompanied refugee minors in Norway. *BMJ Open* 7 (6):e015157. doi:10.1136/bmjopen-2016-015157
21. Jensen TK, Skardalsmo EM, Fjermestad KW (2014) Development of mental health problems - a follow-up study of unaccompanied refugee minors. *Child Adolesc Psychiatry Ment Health* 8:29. doi:10.1186/1753-2000-8-29
22. Muller LRF, Gossmann K, Hartmann F, Buter KP, Rosner R, Unterhitzberger J (2019) 1-year follow-up of the mental health and stress factors in asylum-seeking children and adolescents resettled in Germany. *BMC Public Health* 19 (1):908. doi:10.1186/s12889-019-7263-6
23. Vervliet M, Lammertyn J, Broekaert E, Derluyn I (2014) Longitudinal follow-up of the mental health of unaccompanied refugee minors. *Eur Child Adolesc Psychiatry* 23 (5):337-346. doi:10.1007/s00787-013-0463-1
24. Jensen TK, Skar AS, Andersson ES, Birkeland MS (2019) Long-term mental health in unaccompanied refugee minors: pre- and post-flight predictors. *Eur Child Adolesc Psychiatry* 28 (12):1671-1682. doi:10.1007/s00787-019-01340-6
25. Mitra R, Hodes M (2019) Prevention of psychological distress and promotion of resilience amongst unaccompanied refugee minors in resettlement countries. *Child Care Health Dev* 45 (2):198-215. doi:10.1111/cch.12640
26. Fazel M, Reed RV, Panter-Brick C, Stein A (2012) Mental health of displaced and refugee children resettled in high-income countries: risk and protective factors. *Lancet* 379 (9812):266-282. doi:10.1016/S0140-6736(11)60051-2
27. Hodes M, Jagdev D, Chandra N, Cunniff A (2008) Risk and resilience for psychological distress amongst unaccompanied asylum seeking adolescents. *J Child Psychol Psychiatry* 49 (7):723-732. doi:10.1111/j.1469-7610.2008.01912.x

28. InfoMIE Centre de ressources sur les mineurs isolés étrangers. <https://www.infomie.net/>.
29. Ministère de la Justice (2013) Circulaire du 31 mai 2013 relative aux modalités de prise en charge des jeunes isolés étrangers :dispositif national de mise à l'abri, d'évaluation et d'orientation (NOR : JUSF1314192C).
30. France Terre d'Asile (2020) Mineurs isolés étrangers: comment mieux les protéger. [https://www.france-terre-asile.org/images/Rapport\\_alternatif\\_DPMIE\\_web.pdf](https://www.france-terre-asile.org/images/Rapport_alternatif_DPMIE_web.pdf).
31. Sturm G, Moro M, Baubet T (2012) Mental health care for unaccompanied minors in France: towards a comprehensive approach to the needs of a vulnerable minority. In: Ingelby D, Chiarenza A, Devillé W, Kotsioni I (eds) Inequalities in Health Care for Migrants and Ethnic Minorities, vol II. COST Series on Health and Diversity, Antwerp/Apeldoorn : Garant, pp 207-220
32. Spitzer RL, Kroenke K, Williams JB (1999) Validation and utility of a self-report version of PRIME-MD: the PHQ primary care study. Primary Care Evaluation of Mental Disorders. Patient Health Questionnaire. JAMA 282 (18):1737-1744. doi:10.1001/jama.282.18.1737
33. Gray MJ, Litz BT, Hsu JL, Lombardo TW (2004) Psychometric properties of the life events checklist. Assessment 11 (4):330-341. doi:10.1177/1073191104269954
34. Blevins CA, Weathers FW, Davis MT, Witte TK, Domino JL (2015) The Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5): Development and Initial Psychometric Evaluation. J Trauma Stress 28 (6):489-498. doi:10.1002/jts.22059
35. Campbell-Sills L, Forde DR, Stein MB (2009) Demographic and childhood environmental predictors of resilience in a community sample. J Psychiatr Res 43 (12):1007-1012. doi:10.1016/j.jpsychires.2009.01.013
36. Scali J, Gandubert C, Ritchie K, Soulier M, Ancelin ML, Chaudieu I (2012) Measuring resilience in adult women using the 10-items Connor-Davidson Resilience Scale (CD-RISC). Role of trauma exposure and anxiety disorders. PLoS One 7 (6):e39879. doi:10.1371/journal.pone.0039879
37. Kroenke K, Spitzer RL, Williams JB (2001) The PHQ-9: validity of a brief depression severity measure. J Gen Intern Med 16 (9):606-613. doi:10.1046/j.1525-1497.2001.016009606.x
38. Kroenke K, Spitzer RL, Williams JB (2002) The PHQ-15: validity of a new measure for evaluating the severity of somatic symptoms. Psychosom Med 64 (2):258-266. doi:10.1097/00006842-200203000-00008
39. Kroenke K, Spitzer RL, Williams JB, Monahan PO, Lowe B (2007) Anxiety disorders in primary care: prevalence, impairment, comorbidity, and detection. Ann Intern Med 146 (5):317-325. doi:10.7326/0003-4819-146-5-200703060-00004
40. Grupp F, Piskernik B, Mewes R (2020) Is depression comparable between asylum seekers and native Germans? An investigation of measurement invariance of the PHQ-9. J Affect Disord 262:451-458. doi:10.1016/j.jad.2019.11.055
41. Hinz A, Ernst J, Glaesmer H, Brahler E, Rauscher FG, Petrowski K, Kocalevent RD (2017) Frequency of somatic symptoms in the general population: Normative values for the Patient Health Questionnaire-15 (PHQ-15). J Psychosom Res 96:27-31. doi:10.1016/j.jpsychores.2016.12.017
42. Hinz A, Klein AM, Brahler E, Glaesmer H, Luck T, Riedel-Heller SG, Wirkner K, Hilbert A (2017) Psychometric evaluation of the Generalized Anxiety Disorder Screener GAD-7, based on a large German general population sample. J Affect Disord 210:338-344. doi:10.1016/j.jad.2016.12.012

43. Kocalevent RD, Hinz A, Brahler E (2013) Standardization of the depression screener patient health questionnaire (PHQ-9) in the general population. *Gen Hosp Psychiatry* 35 (5):551-555.  
doi:10.1016/j.genhosppsy.2013.04.006
44. Ashbaugh AR, Houle-Johnson S, Herbert C, El-Hage W, Brunet A (2016) Psychometric Validation of the English and French Versions of the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5). *PLoS One* 11 (10):e0161645. doi:10.1371/journal.pone.0161645
45. Demazure G, Gaultier S, Pinsault N (2018) Dealing with difference: a scoping review of psychotherapeutic interventions with unaccompanied refugee minors. *Eur Child Adolesc Psychiatry* 27 (4):447-466.  
doi:10.1007/s00787-017-1083-y

## Tables

Table 1. Socio-demographic characteristics of the sample, overall and according to uncertain situation. ....	23
Table 2. Uncertain situation according to mental health disorders, trauma and resilience.....	25
Table 3. Uncertain situation according to mental health disorders, trauma and resilience, adjusted for covariates entered separately into the models. ....	26
Table 4. Uncertain situation according to subjective change in symptom severity since reaching adulthood. ....	27

Table 1. Socio-demographic characteristics of the sample, overall and according to uncertain situation.

	Total		Uncertain situation		P <sup>3</sup>
	(N=110)		No (N=64)	Yes (N=46)	
	% (n)		% (n)	% (n)	
Age (yrs) <sup>1</sup>	19.7 [18.1-22.8]		19.7 [18.5-22.8]	19.2 [18.1-22.3]	0.01
Age at arrival in France (yrs) <sup>1</sup>	16.3 [13.4-17.8]		16.3 [13.4-17.7]	16.2 [14.9-17.8]	0.41
Time since end of child protection (yrs) <sup>1</sup>	0.96 [0.01-4.1]		0.92 [0.03-3.9]	0.97 [0.01-4.1]	0.87
Study centre					
Chambery	40.0 (44)		37.5 (24)	43.5 (20)	
Montpellier	33.6 (37)		39.1 (25)	26.1 (12)	
La Rochelle	26.4 (29)		23.4 (15)	30.4 (14)	0.35
Sex (male)	92.7 (102)		95.3 (61)	89.1 (41)	0.28
Country of origin					
Europe	7.3 (8)	}			
Asia	12.7 (14)		28.1 (18)	8.7 (4)	
Africa	80.0 (88)		71.9 (46)	91.3 (42)	0.01
Learnt French prior to arrival (yes)	64.6 (71)		60.9 (39)	69.6 (32)	0.35
Current level of spoken French					
Average	18.2 (20)		17.2 (11)	19.5 (9)	
Good	40.0 (44)		37.5 (24)	43.5 (20)	
Very good	41.8 (46)		45.3 (29)	37.0 (17)	0.68
Living situation					
Rented accommodation	51.8 (57)		65.6 (42)	32.5 (15)	
Young workers home	17.3 (19)		21.9 (14)	10.9 (5)	
Institutional accommodation <sup>2</sup>	10.9 (12)		4.7 (3)	19.6 (9)	
Other (friends, charity org.)	20.0 (22)		7.8 (5)	37.0 (17)	<0.001
Financial income (per month)					
Charity, unemployment, <500€	36.1 (39)		12.5 (8)	70.5 (31)	
600€ - 1100€	28.7 (31)		35.9 (23)	18.2 (8)	
≥1200€	35.2 (38)		51.6 (33)	11.3 (5)	<0.001
Official diploma or qualification (yes)	70.0 (77)		76.6 (49)	60.9 (28)	0.08
Professional training (yes)	30.0 (33)		29.7 (19)	30.4 (14)	0.93
Young adult work contract (yes)	75.5 (83)		85.9 (55)	60.9 (28)	0.003
Current occupation					
School	15.5 (17)		7.8 (5)	26.1 (12)	
Apprenticeship	30.0 (33)		40.6 (26)	15.2 (7)	
Unemployed	10.9 (12)		0 (0)	26.1 (12)	
Salaried work	34.5 (38)		51.6 (33)	10.9 (5)	
Other	9.1 (10)		0 (0)	21.7 (10)	-
Current administrative situation					
Residence permit	68.2 (75)		98.4 (63)	26.1 (12)	
Residence permit application	10.9 (12)		1.6 (1)	23.9 (11)	
Asylum application	6.4 (7)		0	15.2 (7)	
Illegal stay	13.6 (15)		0	32.6 (15)	
Obligation to leave the territory	0.9 (1)		0	2.2 (1)	-

<sup>1</sup>median [min-max]



<sup>2</sup>boarding school, student housing...

<sup>3</sup>Mann-Whitney test for continuous variables and  $\chi^2$  or Fischer test for categorical variables

Table 2. Uncertain situation according to mental health disorders, trauma and resilience.

	N	Uncertain situation			OR (95% CI) <sup>3</sup>	P <sup>4</sup>
		Total Median [IQR]	No Median [IQR]	Yes Median [IQR]		
Somatic symptom score	109	5.0 [6.0]	4.0 [6.0]	5.5 [6.0]	1.75 (0.96 – 3.19)	0.07
Anxiety score	108	4.0 [5.0]	3.0 [4.0]	5.0 [7.0]	1.77 (1.05 – 2.98)	0.03
Depression score	108	6.0 [7.5]	5.5 [8.0]	6.0 [8.0]	1.28 (0.73 – 2.23)	0.40
Somatic score (>=10) (%)	109	19.3	17.5	21.7	2.37 (0.79 - 7.07)	0.12
Anxiety score (>=10) (%)	108	17.6	14.5	21.7	1.62 (0.58 - 4.58)	0.36
Depression score (>=10) (%)	108	28.7	27.4	30.4	1.25 (0.52 - 3.00)	0.60
Major depression (%)	108	14.8	14.5	15.2	1.15 (0.38 - 3.51)	0.81
Effect on daily functioning (%)	100					
No effect		51.0	59.6	39.5	1	
Made things difficult		33.0	31.6	34.9	2.08 (0.80 - 5.42)	
Made things very difficult		16.0	8.8	25.6	5.58 (1.48 - 20.9)	0.04
N° of stressful life events <sup>1</sup>	110	5.0 [4.0]	5.0 [4.0]	5.0 [3.0]	1.04 (0.90 - 1.20)	0.62
PTSD (DSM-5) (%)	110	26.4	23.4	30.4	1.85 (0.74 - 4.60)	0.19
PTSS	98 <sup>2</sup>					
Total score		21.0 [18.0]	19.0 [18.0]	23.0 [15.0]	2.05 (1.06 – 4.00)	0.03
Re-experiencing score		6.0 [7.0]	6.0 [6.0]	7.0 [5.0]	1.84 (0.89 – 3.79)	0.09
Avoidance score		4.0 [3.0]	3.0 [4.0]	4.0 [4.0]	1.69 (0.95 – 3.00)	0.07
Cognitive score		6.5 [7.0]	6.0 [7.0]	7.0 [5.0]	1.59 (0.89 – 2.84)	0.09
Hyper-reactivity score		5.5 [7.0]	5.0 [7.0]	6.0 [6.0]	1.79 (0.90 – 2.59)	0.11
Resilience score	108	29.0 [9.0]	30.5 [9.0]	28.0 [9.0]	0.50 (0.27 – 0.91)	0.02

<sup>1</sup>experienced personally or witnessed

<sup>2</sup>participants declaring at least one stressful life-event considered to be traumatic (LEC-5 checklist)

<sup>3</sup>odds ratios per interquartile range increase, except for number of stressful life events

<sup>4</sup>adjusted for study centre and age

Table 3. Uncertain situation according to mental health disorders, trauma and resilience, adjusted for covariates entered separately into the models.

Adjustment variables:	Odds ratio per interquartile range increase in:		
	Anxiety score OR (95% CI), p <sup>2</sup>	PTSS score OR (95% CI), p <sup>2</sup>	Resilience score OR (95% CI), p <sup>2</sup>
Country of origin: Africa	1.76 [1.04 - 2.99], 0.04	2.00 [1.01 - 3.93], 0.05	0.50 [0.27 - 0.91], 0.02
Reason for leaving: family conflict/abuse	1.81 [1.06 - 3.09], 0.03	1.97 [1.00 - 3.87], 0.05	0.51 [0.28 - 0.93], 0.03
Contact with family	1.86 [1.06 - 3.27], 0.03	1.71 [0.84 - 3.48], 0.14	0.45 [0.23 - 0.86], 0.02
Consultation with psychologist <sup>1</sup>	1.72 [1.01 - 2.92], 0.05	1.88 [0.95 - 3.70], 0.07	0.52 [0.28 - 0.95], 0.03
Having a partner	1.69 [1.00 - 2.87], 0.05	2.23 [1.11 - 4.48], 0.02	0.51 [0.28 - 0.95], 0.03

<sup>1</sup>during child protection

<sup>2</sup>odds ratios per interquartile range increase, except for number of stressful life events, further adjusted for study centre and age

Table 4. Uncertain situation according to subjective change in symptom severity since reaching adulthood.

		Uncertain situation		OR (95% CI)	p <sup>1</sup>
		No (N=64)	Yes (N=46)		
Change since reaching adulthood:		% (n)	% (n)		
Somatic symptoms	Less severe	38.7	19.6	1	0.12
	Unchanged	38.7	52.2	2.73 (0.87 – 8.61)	
	More severe	22.6	28.3	2.72 (0.98 – 7.59)	
Anxiety symptoms	Less severe	48.4	30.4	1	0.02
	Unchanged	37.1	32.6	1.67 (0.64 – 4.36)	
	More severe	14.5	37.0	4.62 (1.57 – 13.58)	
Depressive symptoms	Less severe	45.2	28.3	1	0.003
	Unchanged	38.7	28.3	1.26 (0.45 – 3.47)	
	More severe	16.1	43.4	6.58 (2.11 – 20.5)	
Post-traumatic stress symptoms	Less severe	73.7	75.0	1	0.3
	Unchanged	15.8	7.5	0.43 (0.10 – 1.79)	
	More severe	10.5	17.5	2.02 (0.58 – 7.05)	

<sup>1</sup>adjusted for study centre and age

Figure 1. Subjective change in symptom severity since reaching adulthood (18+)

