Psychological Distress Among Unaccompanied Immigrant Minors in Times of COVID-19: The Role of Friendship Attachment Style and Intolerance of Uncertainty

### Abstract

*Introduction:* This cross-sectional study explored friendship attachment style and uncertainty intolerance among unaccompanied immigrant minors (UIMs) and their associations with psychological distress during the second wave of the COVID-19 pandemic in Italy. *Method:* Participants were 80 male UIMs ( $M_{age} = 17$  yrs, SD = 0.84) hosted in second-line residential facilities. Individual interviews comprising closed and open-ended questions assessed adolescents' friendship attachment style, uncertainty intolerance, and psychological distress.

*Results:* Analysis of quantitative data indicated that 69% and 31% of participants reported a secure and an insecure friendship attachment style, respectively; levels of uncertainty intolerance were low-to-medium, with items assessing prospective anxiety having the highest scores. Analysis of qualitative data supported this pattern, as most UIMs had positive relationships with peers, but some also felt reluctant to trust others and build new friendships due to events experienced before and during migration. Participants expressed feelings of worry about the ongoing pandemic, but they also emphasized their resources in terms of confidence, optimistic attitude, and planning skills, as well as being accustomed to uncertainty. In regression analysis, insecure friendship attachment style and uncertainty intolerance were each associated with higher psychological distress. In addition, securely attached UIMs reported lower psychological distress than their insecurely attached counterparts at low (but not high) levels of uncertainty intolerance.

*Conclusion:* The findings provide initial evidence that, in conditions of societal insecurity, UIMs' sense of trust in peer relationships and the ability to tolerate uncertain situations may

contribute to better psychological outcomes. Implications for developmental theory and practice are discussed.

**Keywords:** Unaccompanied immigrant minors, COVID-19, friendship attachment style, intolerance of uncertainty, psychological distress, Italy

# **1. Introduction**

Unaccompanied immigrant minors (UIMs) are individuals aged less than 18 years who arrive in a foreign country and are not accompanied nor cared for by an adult responsible for them (UNHCR, 1997). Reasons for migration are varied and diverse - including fleeing from violence, criminality, and persecutions, as well as seeking educational and work opportunities (Aldarondo & Becker, 2011). Abundant evidence indicates that UIMs are at increased risk of experiencing psychological distress due to the unique and potentially traumatic challenges they face before, during, and after migration, with separation from family being a prominent factor (Bamford et al., 2021; Corona Maioli et al., 2021; NeMoyer et al., 2019). The COVID-19 pandemic has exacerbated this situation, contributing to an increased isolation and disruption of social relationships due to the suspension of key services and the introduction of social distancing measures in an effort to contain the spread of the virus (Barn et al., 2021).

Beyond these challenges, UIMs are involved in handling normative developmental tasks (Erikson, 1968). Among these, peer relationships play an essential role in adolescence because they provide an important source of guidance and support (Hartup & Laurson, 2014). However, UIMs may strive to establish new friendships in the receiving country because of cultural barriers, integration issues, and discrimination (Ní Raghallaigh, 2011a). Migration-related experiences and hardship generate feelings of mistrust that could compromise these youths' motivation to develop friendships (Essex et al., 2021). Moreover, the tightening of the reception system conditions and a general, COVID-19 related precarity have likely contributed to UIMs' heightened anxiety over the uncertainty of their future (Barn et al., 2021; Oldroyd et al., 2022).

Although scholars have empasized the need to better understand the psychological impact of the COVID-19 pandemic among underrepresented, potentially vulnerable

populations (Holmes et al., 2020), few studies have focused on UIMs' experiences during this unique historical period. In particular, the existential condition of uncertainty and the relational difficulties linked to their marginalized position in society may be crucial in explaining these youths' levels of psychological distress. Building on an attachment, relational-based perspective (Juang et al., 2018; Schwartz et al., 2021), the current study aimed to address this gap by exploring the role of friendship attachment style and uncertainty intolerance in UIMs' psychological distress. In doing so, we used a mixed-method approach to obtain a more fine-grained picture of these youths' subjective experiences and attitudes concerning peer relationships and coping with an uncertain future in relation to their psychological condition amidst the pandemic.

# 1.1 Friendship attachment style

Attachment relationships play an important role in immigrant youth's psychological adjustment, supporting them in the management of post-migration stress on their path to integration (Juang et al., 2018; Schwartz et al., 2021). According to attachment theory (Bowlby, 1980), the early socioemotional bonds that children form with their caregivers impact expectations of relationships with parents and peers (Ainsworth, 1989), creating either "secure" or "insecure" working models of relationships (Mikulincer & Shaver, 2007). Secure friendship attachment during adolescence is associated with positive functioning in adulthood (Furman et al., 2002; Mothander & Wang, 2014) and lower rates of negative mental health outcomes (Cook et al., 2016; Meadows et al., 2006). Morever, it can serve as a protective factor against depression and anxiety after exposure to violence and traumatic events (Heinze et al., 2018). Indeed, engaging in close friendships involves warmth, concern, communication, and perspective-taking abilities that are beneficial for both short- and long-term psychological adjustment (Bagwell & Bukowski, 2018). On the contrary, insecure

(Fraley et al., 2011). Specifically, individuals with an "anxious" attachment often experience fear of rejection and tend to engage in emotional dependence, while those with an "avoidant" attachment are uncomfortable with emotional closeness (Ainsworth, 1979; Mikulincer & Shaver, 2007). In adolescence, insecure attachment to peers is related to more externalizing difficulties and mental health problems (Cook et al., 2016); furthermore, it can be a risk factor for elevated depressive symptoms when adolescents are exposed to stressful situations (Heinze et al., 2018).

Despite the relevance of friendship attachment patterns in adolescence, little is known about how UIMs experience these emotional bonds after resettlement in the host country and the extent to which such bonds might have influenced their psychological adjustment during the pandemic. In a recent study, Sleijpen et al. (2022) found that young unaccompanied refugees in Norway did not show substantial changes in attachment insecurity over time. However, no information on attachment to peers was collected, and only anxious and avoidant patterns were assessed. Thus, more research is warranted to shed light on the role of friendship attachment style in UIM's psychological adjustment.

#### 1.2 Intolerance of uncertainty

Intolerance of uncertainty is an individual difference characteristic referring to the extent to which a person can tolerate the fact that negative events may occur, and that there is no definite way to predict such events (Carleton et al., 2007). It is associated with intense emotional reactions to uncertain, unpredictable, and ambiguous events regardless of their probability of occurrence, as well as to avoidant behavioral tendencies aiming to reduce anxiety (Osmanağaoğlu et al., 2018). Research has shown that this trait-like characteristic is linked to excessive worries and anxiety-related problems (Rosser, 2019). Furthermore, studies conducted during the pandemic found associations with fear of the coronavirus

disease, sleep difficulties, and emotional symptoms among adolescents (Korte et al., 2021; Wu et al., 2021).

Immigrant and refugee populations commonly experience high levels of uncertainty concerning their future due to resettlement issues (e.g., obtaining a residence permit, finding a job, securing a stable accommodation). However, to our knowledge, studies investigating UIMs' capacity to tolerate uncertain events are still lacking. A study of Colombian internal migrants indicated that ethnic discrimination increased intolerance of uncertainty which, in turn, resulted in more mental health difficulties (Urzúa et al., 2023). Yet, the extent to which this individual characteristic may contribute to UIMs' psychological distress during the COVID-19 health emergency remains unclear. Given the availability of evidence-based interventions targeting adolescents' uncertainty intolerance to reduce excessive worry (Wahlund et al., 2020), a better understanding of how UIMs cope with fear of the unknown is essential to tailor such programs to the unique needs of this population.

## 1.3 The social ecology of UIMs in Italy

In the past 10 years, Italy has witnessed the arrival of over 100,000 UIMs coming mainly via the Mediterranean route (Save the Children, 2023). The country currently hosts 20,089 UIMs (Italian Ministry of Labor and Social Policy, 2023); of these, the vast majority (85%) is male, and over two-thirds (68%) are aged 16-17 years. The most represented nationalities are Ukraine (25%), Egypt (24%), Tunisia (9%), Albania (7%), and Pakistan (5%). UIMs live in first-reception (25%) or in second-reception facilities (75%), are guaranteed a residence permit, and are supported by social workers in continuing their education or finding a traineeship/job. When they come of age, they need to exit the reception system; however, the Italian law establishes that they can remain in charge of social services for an additional period, should they have not reached autonomy by the time they turn 18.

The outbreak of the COVID-19 pandemic had major consequences for UIMs and the entire reception system (Barn et al., 2021). In the first wave, the national lockdown involved the suspension of essential services (e.g., provision of legal information and psychosocial support, administrative procedures related to occupational and educational integration) which caused elevated distress and conflicts within the housing facilities (CIR, 2020). In the second wave – during which the current study was conducted – many restrictions were still in place, especially in the context of school (online lessons), training/work (social distancing measures, daily COVID-19 testing), and leasure activities, generating discomfort and loneliness (Faraci et al., 2022).

#### 1.4 The present study

The overall aim of this exploratory study was to investigate the role of friendship attachment style and intolerance of uncertainty in UIMs' levels of psychological distress during the second wave of the pandemic in Italy. Specifically, we used a mixed-method approach with a convergent parallel design, which involves the collection of quantitative and qualitative data in the same timeframe (Mathur et al., 2020; Tulane et al., 2018). This design was based on other recent studies with underrepresented populations (e.g., Hartonen et al., 2021; von Haumeder et al., 2019) and allowed us to assess the frequency/magnitude of our main constructs (i.e., friendship attachment style, intolerance of uncertainty, psychological distress) via standardized questionnaires, as well as to obtain more in-depth and nuanced insights through participants' answers to open-ended questions.

We addressed the following research questions:

1) What is the distribution of friendship attachment styles in this group of adolescents, and how do UIMs describe their emotional bonds with peers?

2) How do the participants perceive and respond to uncertain situations, also in relation to the COVID-19 pandemic?

3) What is the contribution of friendship attachment style and intolerance of uncertainty in explaining UIM's levels of psychological distress?

### 2. Methods

#### 2.1 Participants

We individually interviewed 80 male UIMs hosted in 24 different residential facilities in 3 regions of Italy (i.e., Veneto, Emilia-Romagna, and Calabria). Participants were recruited through informal contacts with social cooperatives managing the above-mentioned residential facilities. Inclusion criteria were (a) being aged less than 18 years or having turned 18 in the six months prior to the interview, (b) being male, and (c) living in a residential community for minors. Criterion (a) was established in relation to the Italian law, according to which UIMs can be exceptionally supported and hosted by social services for a further period after turning 18. To ensure homogeneity in our sample, however, we included criterion (c) to make sure that their living conditions did not substantially differ from their younger peers. As for criterion (b), considering that most UIMs living in Italy are males, the percentage of female minors hosted in the involved communities was so low that we chose not to include them in the analytic sample. Yet, to avoid generating feelings of exclusion, the 2 girls residing in one of the facilities were nonetheless given the possibility to participate in the interview. Finally, we established as the only exclusion criterion having a psychiatric diagnosis to prevent reactivating feelings of distress in potentially vulnerable individuals, although the interview did not cover particularly sensitive or personal topics.

Prior to data collection, the approval of the Ethics Committee of the School of Psychology at University of [blinded] was sought and granted (protocol n. [blinded]) for the study material and procedures. Before conducting the interviews, we collected written informed consent from the participants' legal guardians (in case of minors) or from the participants themselves (in case of participants aged 18 years). We emphasized that

participation was voluntary and that it would not have any consequence whatsoever on their residence permit procedure. Moreover, we specified that no information would have been released to the authorities, the cooperatives' staff or the legal guardians.

Sample characteristics are reported in Table 1. Participants' mean age was 17 years (SD = 0.84, range = 14-18). Overall, 13 different origin countries were represented, the main ones being Albania (25%), Bangladesh (24%), Pakistan (19%), Morocco, Tunisia, and Egypt (7.5% each). UIMs' average length of stay in the residential facilities was 17 months. *2.2 Procedure* 

Data collection took place during the second wave of the COVID-19 pandemic (December 2020-May 2021). In that period, the severity of COVID-related restrictions varied on a regional basis depending on the number of cases, health system conditions, and so forth. The three regions in which the data was collected were characterized by medium-severe restrictions (e.g., hybrid teaching in schools, partial closure of shops and restaurants, requirement to wear face masks both indoor and outdoor) for most of the time.

Individual interviews lasted between 45-60 minutes each, and included both open and closed-ended questions concerning participants' personal characteristics, peer relationships, and psychosocial adjustment (see Measures section). Interviews were conducted online through video-calls due to health safety norms and local restrictions.

Specifically trained and supervised researchers led the interviews and offered participants the possibility to speak in Italian, English or French. For those UIMs who were not proficient in any of the three above-mentioned languages, linguistic-cultural mediators (LCMs) were made available. The majority of interviews (62%) was carried out in Italian; 5% of the participants chose English, and only 1% chose French. The remaining interviews (32%) were conducted in 4 different languages (Bengali, Arabic, Urdu, and Albanian) with the assistance of LCMs.

## 2.3 Measures

*Sociodemographics.* Participants were asked about their age, country of origin, religion, length of time in the residential facilities in Italy (in months), Italian language proficiency, family composition, educational level, pre-and post-migration occupation.

*COVID-19 perceived dangerousness and likelihood of infection.* UIMs reported on their subjective perception of the dangerousness of COVID-19 on a 5-point Likert scale (1 = not at, 5 = extremely), and on the likelihood of contracting the disease using a continuous scale from 0 to 100 (AUTHORS, 2022).

*Friendship attachment style* was measured by the Attachment Questionnaire for Children (AQ-C; Muris et al., 2001). Adolescents are provided with three sentences reflecting secure, avoidant, and ambivalent attachment style, and are requested to choose the description that applies best to how they feel and perceive their relationships with peers. The AQ-C has shown good convergent and discriminant validity, with secure attachment style being positively linked to trust (Muris et al., 2001), and avoidant and ambivalent styles being associated with higher levels of psychological distress (Ko et al., 2019; Muris et al., 2003).

Intolerance of uncertainty was measured using the Intolerance of Uncertainty Scale – Short Form (IUS-SF; Carleton et al., 2007). Participants are asked to express their level of agreement with 12 items; responses range from 1 = "not at all characteristic of me" to 5 = "entirely characteristic of me". Items reflect two different dimensions of uncertainty intolerance: "Prospective Anxiety", defined as fear or anxiety towards future events (7 items; e.g., "I always want to know what the future has in store for me"), and "Inhibitory Anxiety", that refers to how uncertainty can inhibit action and experience (5 items; e.g., "When I am uncertain I can't function very well"). The IUS-SF has been validated in various countries, including Italy (Lauriola et al., 2016), and has been used with adolescents (e.g., Dekkers et al., 2017). Cronbach Alpha for this instrument was .67, 95% CI [.56 - .75].

*Psychological distress* was measured with the Patient Health Questionnaire-4 (PHQ-4; Kroenke et al., 2009), which assesses the frequency of symptoms of depression (e.g., "little pleasure in doing things") and anxiety (e.g., "feeling nervous") over the past two weeks. Response options range from 0 = never at all to 3 = almost every day; a high cumulative score indicates a higher degree of psychological distress. The total score ranges from 0-12, with 6 being the recommended cut-point to detect moderate/severe distress. In our sample, 51% (N = 41) of participants reported moderate to severe levels of psychological distress. The PHQ-4 has been previously validated, showing good reliability and invariance across different ethnic groups (Tibubos & Kröger, 2020). In the present study, Cronbach Alpha for this scale was .63, 95% CI [.44 - .74].

# 2.4 Analyses

We used IBM SPSS statistics (version 26, IBM CORP) and R to analyze quantitative data. Descriptive statistics and correlations for sociodemographic variables, COVID-19 perceived dangerousness and likelihood of infection, friendship attachment style, intolerance of uncertainty, and psychological distress are presented in Table 2.

In addition, we used multiple linear regression to answer our third research question. In this analysis, friendship attachment style and intolerance of uncertainty were entered as independent variables, and psychological distress was considered as the dependent variable. Given that COVID-19 perceived dangerousness and likelihood of infection have been shown to be associated with mental health outcomes among the general population (Li & Lyu, 2021; Serafini et al., 2020), and that time of residence in reception facilities may impact on UIMs' psychological adjustment (Oppedal et al., 2020), these variables were controlled for in the analysis.

We used thematic content analysis (see Boyatzis, 1998; AUTHORS, 2022) to analyze qualitative responses regarding friendship attachment style and uncertainty intolerance. This

method entails the identification and extraction of recurring themes among participants, and thus the transformation of qualitative data into categorical data (i.e., percentage of the frequency with which the themes appear). These processes are conducted separately by two independent coders, who then compare and review the identified categories until reaching an agreement on each theme. The mean percentage of agreement between coders was 91% (range = 87-100).

# 3. Results

#### 3.1 Friendship attachment style

Based on participants' responses to the AQ-C (Muris et al., 2001), 69% and 31% percent of UIMs were classified as having a secure and an insecure friendship attachment style, respectively. Among the insecurely attached participants, 21% recognized themselves in the description of the insecure-avoidant style, and 10% in the insecure-ambivalent one (see Figure 1).

Overall, this distribution was mirrored in UIM's narratives. Indeed, thematic analysis revealed that several participants felt surrounded by positive relationships with peers: 34% reported having "a lot of friends", both in Italy and their home country, while only 6 (8%) said they usually preferred to stay on their own. However, 20% of the interviewees found it hard to make friends for a number of reasons, such as fear of others' judgment, their own personality (i.e., being shy, reserved, or wary), or factors related to the country of resettlement: "*When I was in Bangladesh it was easy to make friends: it's more difficult if you don't speak the same language, and there are few chances to meet people 'in the flesh' because of COVID*". In addition, trust issues emerged among more than half of the sample (51%): "*First, I need to observe the person, I have to see if they have a 'good soul': I don't care where they come from or what they believe in, but how they behave*". Participants explained that they often felt reluctant to fully trust others and were cautious towards new

friendships, especially after their migration experience or because they grew up in dangerous environments: "I don't trust others easily, I am afraid because people are only interested in money: I know this, because I grew up on the streets and it worked that way."; "I trusted people before arriving here, but now I try to give as little trust as possible: I saw many things during my journey...". Of note, 18.75% of the participants specified a relevant difference between "real friends" and "face friends" or acquaintances, and how it was extremely difficult, but rewarding, to build deep and enduring friendships: "My true friends are like 'brothers' to me and I trust them blindly, not like my 'just' friends".

# 3.2 Intolerance of uncertainty

On average, participants reported moderate levels of uncertainty intolerance (see Table 2). The items with the highest scores (i.e., indicating more intolerance of uncertainty) were "I should be able to organize everything in advance" (M = 3.48, SD = 1.27), "I always want to know what the future has in store for me" (M = 3.14, SD = 1.70), and "I can't stand being taken by surprise" (M = 2.89, SD = 1.16). These items belong to the Prospective Anxiety subscale. In contrast, the lowest scores (i.e., indicating less uncertainty intolerance) were observed for items "When it's time to act, uncertainty paralyses me" (M = 1.70, SD = 0.85), "Uncertainty keeps me from living a full life" (M = 1.79, SD = 0.95), and "The smallest doubt can stop me from acting" (M = 1.79, SD = 0.84), all of which are part of the Inhibitory Anxiety subscale.

In support of this pattern, participants' answers to open-ended questions evidenced different attitudes and emotional reactions in the face of uncertainty and, more specifically, toward the ongoing pandemic situation. About one-third of interviewees (33%) described a state of nervousness and concern, exacerbated by the pandemic but often present in their everyday lives: "*Sometimes questions keep coming to my mind and I wonder what will happen ... But really, even without the COVID we don't know what will happen tomorrow, so* 

we are always in uncertainty, although maybe a little more now". On the other hand, 20% of the participants appeared to be calm and optimistic about future developments. Some of them felt confident in their own personal strength or planning abilities to deal with uncertain situations (*"The more difficulties one encounters, the more mature one becomes"*; *"I have my plan A, but also a plan B and C"*), while others relied on their religious faith (*"I'm not nervous because Allah decides my future, so he will decide well for me"*). Another recurring theme among 10% of the participants was being used to uncertainty, which was associated with negative feelings (e.g., "boredom", "tiredness"), but also with being more equipped to cope with the COVID-related situation: *"I'm waiting, I just keep doing the things I usually do. I'm used to uncertainty, when I'm faced with it I always do my best*".

3.3 Associations of friendship attachment style and intolerance of uncertainty to psychological distress

Results of multiple linear regression analysis are shown in Table 3. The overall regression model was statistically significant ( $R^2 = .18$ , F(6, 71) = 2.601, p = .024). Insecure attachment style and intolerance of uncertainty were each independently and significantly associated with higher levels of psychological distress. Moreover, a significant interaction between friendship attachment style and intolerance of uncertainty emerged. As can be seen in Figure 2, at low levels of uncertainty intolerance, securely attached UIMs reported lower psychological distress than their insecurely attached counterparts, whereas at high levels of uncertainty avoidance, the two groups showed similar levels of this outcome variable<sup>1</sup>.

## 4. Discussion

The current study provides a novel contribution to the emerging literature concerning the role of attachment relationships and intolerance of uncertainty in levels of psychological distress among UIMs during the COVID-19 health emergency. Specifically, we adopted a mixed-method approach to gain a more nuanced understanding of participants' subjective experiences, particularly in relation to their relationships with peers and their ability to tolerate uncertainty.

Our first research question focused on participants' friendship attachment style. The majority of interviewed UIMs (69%) could be classified into the secure attachment pattern, whereas the remaining 31% reported an insecure attachment pattern. Although caution is needed when interpreting this result, it resembles prior studies using the same measure with adolescents, in which most participants identified themselves with the secure peer attachment style (63%, Nishikawa et al., 2010; 77%, Puissant et al., 2011). Overall, these findings were mirrored in adolescents' answers to open-ended questions. Indeed, while most of them were surrounded by friends, several also described unique difficulties in building new friendships, including cultural and linguistic barriers, which often led UIMs to befriend mostly other migrant youth rather than local, non-migrant adolescents (Ní Raghallaigh, 2011a). This is not surprising, since poor language proficiency and lack of social support, together with experiences of discrimination and daily hassles, have been identified among the most frequent post-migration stressors faced by UIMs (Bamford et al., 2021). Consistent with our participants' answers, recent research also points to an increased isolation experienced by immigrant youth in times of COVID (AUTHORS, 2022; Barn et al., 2021). Another recurrent theme concerned issues of trust that frequently originated from hardships experienced during these adolescents' childhood in their home country as well as from migration-related traumatic experiences, a finding that aligns with extant research on refugee and asylum seeking youth (Essex et al., 2021). The dimension of trust is a key aspect of peer relationships in adolescence: a recent meta-analysis on peer attachment and internalizing problems showed how trust, together with alienation, was the factor more strongly related to adolescents' depressive symptoms (Gorrese, 2016).

The second research question explored intolerance of uncertainty, a construct that has largely been neglected among the UIM population despite their existential condition of uncertainty in relation to legal status (El-Shaarawi, 2015). In the present study, participants reported a low-to medium level of uncertainty intolerance. Specifically, items with the highest average scores referred to the cognitive or emotional dimension of prospective anxiety, while items describing effects of this anxiety on the inhibition of action in the face of uncertainty had the lowest average scores. Hence, beyond the negative feelings triggered by uncertain situations, the UIMs in our sample were still able to deal effectively with such stressors. This was also apparent in their answers to open-ended questions, in which they admitted to be affected by worry and concern for the future, but they also felt confident in their planning and coping strategies to overcome the uncertainty connected to the pandemic. Consistent with previous studies involving both Muslim and Christian refugees and UIMs (Adedoyin et al., 2016; Ní Raghallaigh, 2011b), a few participants also indicated their religious beliefs as a source of support and strength in uncertain times.

As regards our third research question, both insecure friendship attachment style and more intolerance of uncertainty were linked to higher levels of psychological distress. This finding supports previous research on adolescents showing that insecure attachment to peers and low tolerance of uncertain situations are associated with poorer mental health outcomes (Cook et al., 2016; Rosser, 2019), also among immigrant populations (Urzúa et al., 2023). Indeed, insecure working models of attachment can negatively impact on individuals' expectations of others as being a source of security and support, possibly leading to mental health problems (Mikulincer & Shaver, 2007). Furthermore, those who have difficulty dealing with uncertain situations tend to experience anxiety and worry, which are two main manifestations of psychological distress (Rosser, 2019). Our study also revealed that low levels of uncertainty intolerance were linked to fewer symptoms of psychological distress,

but only among youth with a secure friendship attachment style, whereas in the presence of high uncertainty intolerance, UIMs did not differ in psychological distress as a function of their attachment style. Thus, among individuals with less uncertainty-related anxiety, friendship attachment style served as a protective factor, with securely attached UIMs showing lower levels of psychological distress than their insecurely attached counterparts. Hence, the ability to tolerate uncertainty might be pivotal for populations like UIMs and asylum seekers, who often find themselves overwhelmed by feelings of anxiety and fear of the future that are intrinsic to their unique post-migration experience as well as to the pandemic period. Peer support and attachment, especially in the absence of family members, also play a major role in these associations; indeed, positive friendship attachment style buffers the detrimental effect of exposure to violence on mental health in adolescents (Heinze et al., 2018). Moreover, peer social support can help immigrant youth navigate the acculturation process by increasing cultural competence and promoting their adjustment to the host country, ultimately protecting or helping UIMs deal with daily life stressors such as discrimination (Ní Raghallaigh, 2011a; Oppedal & Idsoe, 2015).

# 4.1 Limitations

This study is among the first to explore friendship attachment style and uncertainty intolerance and their associations with psychological distress among UIMs during the COVID-19 pandemic, providing insights into the subjective experiences of this potentially vulnerable population through the use of a mixed-methods approach. However, some limitations need to be acknowledged. First, the cross-sectional design limits causal inference of the identified associations among our study variables. In particular, the lack of prepandemic data precludes from direct comparison of UIM's psychological distress before and during the pandemic. Although this design was motivated by the unique characteristics of UIMs' living conditions (e.g., high mobility and precariousness, difficulty with recruitment),

future studies should adopt a longitudinal design to tackle developmental trajectories and test causal relationships among variables to identify the mechanisms underpinning UIMs' psychological adjustment over time in the context of the COVID health emergency (Bonati et al., 2022). Second, our sample was exclusively composed of male adolescents due to the unbalanced gender distribution of UIMs who migrate to Italy (Save the Children, 2023). Even though this situation is common to many other receiving countries, future studies are needed to investigate the experience of unaccompanied girls, who are at increased risk of experiencing sexual violence and therefore deserve particular attention (Oldroyd et al., 2022). Relatedly, the heterogenity in terms of participants' countries of origin and religious affiliation prevented us from taking possible influences of their cultural and religious values into account. Given that these variables have been found to influence individuals' expectations about intimacy, gender roles, and relationships with peers (Del Giudice, 2019; Wongpakaran et al., 2012), further research may involve larger samples of UIMs representing different cultural and religious groups to ascertain the role of such variables in how UIMs experience attachment relationships with friends and cope with uncertain situations. Finally, this study only assessed peer attachment. Because parent-child relationships are essential in shaping individuals' internal working models (Gorrese & Ruggieri, 2012), studies that also include a measure of adolescents' attachment to parents/caregivers are warranted to provide a more complete picture of UIM's attachment styles (Sleijpen et al., 2022).

### 5. Conclusions

Our study lends support to the view that underrepresented populations like UIMs, who already find themselves in a condition of existential uncertainty, may be particularly at risk in terms of psychological distress in the face of collective emergencies like the COVID-19 pandemic. However, the results also provide initial evidence that security and trust in peer relationships, in combination with the ability to tolerate uncertain situations, contribute to

better mental health outcomes among UIMs. Considering the substantial difficulties observed among UIMs in response to the COVID-19 restrictive measures (López Peláez et al., 2020), our findings can inform possible interventions targeting youths' maintenance and development of secure attachment styles with peers and/or their ability to tolerate uncertainty (Wahlund et al., 2020) in order to reduce negative mental health outcomes among this potentially vulnerable population. Furthermore, our study highlights the usefulness of integrating quantitative and qualitative approaches to obtain a more nuanced picture of UIMs' perceptions and experiences during this unique historical period.

# Footnote

A simple slope analysis with intolerance of uncertainty as predictor and attachment style as moderator was performed via the package *interactions* (Long, 2019) in R software. No significant slopes emerged, neither among participants with a secure attachment style ( $\beta$  = 1.45, *SE* = .87, *p* = .10) nor among those with an insecure attachment style ( $\beta$  = -2.24, *SE* = 1.52, *p* = .14).

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	Μ	SD	Range
Religion (N, %)			
Muslim	69 (86.25%)		
Christian (catholic, orthodox, protestant)	11 (13.75%)		
Educational level (N, %)			
No education	1 (1.25%)		
Attended or completed primary school	8 (10%)		
Attended or completed middle school	34 (42.50%)		
Attended or completed high school	37 (46.25%)		
Occupational status (N, %)			
Unemployed	6 (7.50%)		
Student	36 (45%)		
Student worker	31 (38.75%)		
Employed	3 (3.75%)		
Other	4 (5%)		
Time of residence in the community in Italy (months)	17	2.33	4-63

**Table 1.** Sample characteristics, N = 80.

<b>Table 2.</b> Correlations and Descriptive Statistics for Study Variables, $N = 80$ .
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	1.	2.	3.	4.	5.	6.	7.
I. Friendship attachment style		.25*	.26*	04	.04	25*	.02
2. Intolerance of uncertainty			.14*	02	.04	15	03
3. Psychological distress				.15	05	24*	.11
4. Perception of COVID-19 langerousness					.38***	25*	.22
5. Perception of COVID-19 likelihood of infection						01	.13
5. Residence time in the community							06
7. Age							
M (SD)	1.31 (0.47)	2.40 (0.54)	6.07 (3.60)	2.99 (1.20)	54.16 (30.34)	17.30 (10.05)	17.18 (0.84)

\* p < .05, \*\* p < .01, \*\*\* p < .001

**Table 3.** Multiple linear regression on psychological distress, N = 80.

	β (SE)	t	р	partial eta <sup>2</sup>
Time of residence in the community (months)	-0.05 (0.04)	-1.144	.256	.02
COVID-19 likelihood of infection	-0.02 (0.01)	-1.555	.124	.03
COVID-19 perceived dangerousness	0.58 (0.41)	1.443	.154	.03
Attachment style	11.08 (4.54)	2.437*	.017	.05
Intolerance of uncertainty	5.14 (2.32)	2.211*	.030	.01
Attachment styleXIntolerance of uncertainty	-3.69 (1.76)	-2.095*	.040	.06

\* *p* < .05

Figure 1. Distribution of friendship attachment styles, N = 80.



*Note*. Friendship attachment style was coded as 1 = secure, 2 = insecure avoidant, 3 = insecure ambivalent.

Figure 2. Interaction between friendship attachment style and intolerance of uncertainty on psychological distress, N = 80.



*Note*. Friendship attachment style was coded as 1 = secure, 2 = insecure (avoidant/ambivalent).