

Abstract

This study investigated aggression and the relation to moral disengagement among youth who came to Norway as unaccompanied minor asylum seekers. The aim was to examine if exposure to trauma and acculturation-related hassles predicted reactive aggression and proactive affiliation-related aggression, and if moral disengagement mediated these relations. The study was based on self-report questionnaire data from 577 youth, where 474 were males and 103 were females. They participated in the second wave of a mixed-method longitudinal study of the sociocultural integration and mental health of unaccompanied minor asylum seekers after resettlement, carried out by the Norwegian Institute of Public Health (NIPH). The participants originated mainly from Afghanistan, Somalia, Iraq and Sri Lanka. At the time of the data collection, they had on average been resettled for 4.63 years ($SD = 2.40$), and their mean age was 20.09 years ($SD = 2.61$). Findings showed that the participants reported low levels of aggression. Males displayed higher levels of proactive affiliation-related aggression than females, while the gender difference for reactive aggression was non-significant. In-group hassles and perceived discrimination predicted proactive affiliation-related aggression. Moral disengagement partly mediated the relation between perceived discrimination and proactive affiliation-related aggression. Perceived discrimination was the only significant predictor of reactive aggression, but moral disengagement did not mediate the relation. The results derived from this study indicate that hassles after resettlement contributed more to aggression than pre-migration trauma. The study supports the harmful effects of discrimination, which was the most important acculturation-related contributor to aggression in this group of young refugees. The findings are discussed in light of interventions to reduce discrimination and its harmful consequences.

Keywords: Reactive aggression, proactive affiliation-related aggression, unaccompanied minor asylum seekers, perceived discrimination, moral disengagement.

Preface

In this study, data were provided from the subproject “Unaccompanied Refugee Minors”, which is a part of the Norwegian Institute of Public Health’s (NIPH) research program the *Youth, Culture and Competence project* (YCC; UngKul). This project studied how unaccompanied refugees resettled in Norway adapt in their everyday life, and has resulted in many interesting publications and reports (see Keles, Friborg, Idsøe, Sirin, & Oppedal, 2016a; Keles, Idsøe, Friborg, Sirin, & Oppedal, 2016; Oppedal, Seglem, Jensen, & Haukeland, 2013; Oppedal, Seglem, & Jensen, 2009; Seglem, Oppedal, & Raeder, 2011; Seglem, Oppedal, & Roysamb, 2014).

For a long time, we had been curious about how it was like coming to Norway as an unaccompanied minor asylum seeker. Developing adequate research questions was surprisingly challenging. We decided to investigate aggression and are now eager to share knowledge and confront prejudices about expressed aggressive behavior in this group.

We have carried out all the analyses in this study by ourselves. The learning curve related to statistics has been steep. Andy Field (2013) and his amusing YouTube videos and colorful statistic book deserve some of the credits. Andrew Hayes (see Hayes & Little, 2013) and his not so colorful book and articles about mediation analyses have also been very helpful. Through the writing process, we have learned to handle enormous amount of literature, to give and receive feedback and to relate to the term “kill your darlings”. We have cooperated closely during the whole process, and are jointly responsible for all the content of this work (see Appendix H).

We would like to thank two inspiring supervisors who have been both patient and extremely helpful during this process: Britt-Marie Drottz Sjöberg, our supervisor at NTNU, who always gave us new ideas, encouraged our ambitions and reminded us to stay close to our data, and Brit Oppedal, project leader of the YCC- project, who gave us access to data, and has impressive knowledge of this field. We could not have carried out this project without her.

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Introduction

Among the 65 million people forced to flee their homes in the world today, the United Nations Refugee Agency (UNHCR) considers unaccompanied minor asylum seekers the most vulnerable group (UNHCR, 2005, 2016). They are *unaccompanied* in the sense that they travel without parents or legal caretakers, they are *minors*, i.e. they are less than 18 years old and, like most children, crucially dependent on care and protection, and they are *asylum seekers*, a status associated with a high prevalence of stress and uncertainty about the future. According to Eurostat (2016), 90.000 unaccompanied minor asylum seekers¹ were registered in Europe, and the numbers are unlikely to decrease. Research has demonstrated that this group has been exposed to many traumatic events (Bean, Derluyn, Eurelings-Bontekoe, Broekaert, & Spinhoven, 2007; Bean, Eurelings-Bontekoe, & Spinhoven, 2007; Derluyn, Mels, & Broekaert, 2009; Huemer et al., 2009; Jensen, Fjermestad, Granly, & Wilhelmsen, 2015; Sourander, 1998; Wiese & Burhorst, 2007). Additionally, they experience more daily hassles after resettlement than other groups of youth in the resettlement country (Seglem et al., 2014).

Many researchers have directed their attention to how these experiences and dramatic life changing events affect children and youth in a vulnerable developmental period. Studies mainly focus on how psychological distress among unaccompanied minors manifest as depression and post-traumatic stress disorder (PTSD) (Bean, Derluyn, et al., 2007; Derluyn et al., 2009; Huemer et al., 2009; Oppedal & Idsoe, 2012; Sourander, 1998). Less is known about how their experiences relate to aggression.

Aggressive behavior has a variety of forms, functions and motives with differentiated associations with depression, PTSD and several other mental problems (Augsburger, Dohrmann, Schauer, & Elbert, 2016; Byrne & Riggs, 1996; Fite, Stoppelbein, & Greening, 2009; Vitaro, Brendgen, & Tremblay, 2002). Research has also confirmed that moral disengagement is one of the mechanisms that facilitate aggressive behavior by making immoral acts more tolerable for the individuals (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Caprara et al., 2014; Gini, Pozzoli, & Hymel, 2014; Pelton, Gound, Forehand, & Brody, 2004). Aggressive behavior may influence sociocultural integration of unaccompanied minors, such as the youth's functioning in everyday life, both in relation to school and in relation to building new social networks.

¹ For this report, we use the abbreviation "unaccompanied minors" when referring to unaccompanied minor asylum seekers.

Therefore, enhanced understanding of aggression among these vulnerable children can supplement current knowledge about their mental health and thereby improve the health services offered to them, as well as facilitate positive integration and adjustment after resettlement.

On this basis, the overall aim of the present study is to examine expressions of aggression in the refugee context of unaccompanied minors. We include various pre- and post-migration stressors relevant for refugees as predictors of aggression, and investigate moral disengagement as a potential mediator of the association between the stressors and aggression.

Unaccompanied Minors in Norway

The Norwegian authorities define unaccompanied minors as persons under the age of 18 who are coming without the company of their parents or others with parental responsibility to Norway to seek protection (UDI, 2016c). As asylum seekers, unaccompanied minors do not have a formal status as refugees until they have their asylum applications approved. A refugee is “someone who is unable or unwilling to return to his or her country of origin owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion” (UNHCR, 2010, p. 3). Some people who have fled persecution or political violence may have their refugee status acknowledged by the UNHCR and are granted permission to travel to the countries of protection as UN quota refugees. Others flee on their own and arrive at the borders as asylum seekers. In Norway, asylum seekers may be granted a residence permit based on their need for protection from persecution, for humanitarian reasons (e.g. the minor does not have any care provider in his or her home country, the health status is severe or other reasons as stated in the Immigration Act) or on other specific grounds (UDI, 2017).

In 2015, 5300 unaccompanied minor asylum seekers applied for asylum in Norway, the largest number ever registered (UDI, 2016a). When arriving in Norway, unaccompanied minors and other asylum seekers must register with the police authorities and at the Norwegian Directorate of Immigration (UDI). UDI is responsible for processing the asylum claims, and current guidelines from the Norwegian government determine the outcome. For unaccompanied minors who arrived in Norway in 2016, the estimated waiting time is ten months for interview, and additionally six month for the outcome, although the waiting time can be longer (UDI, 2016b).

While the asylum applications are processed, unaccompanied minors below the age of 15 stay in care centers run by the national child welfare services, whereas unaccompanied minors older than 15 years stay in special asylum centers, separated from adult asylum seekers, regulated by the UDI.

The Directorate of Integration and Diversity allocate the unaccompanied minor who receives a positive outcome on the asylum application to a municipality (IMDi). In 2015, the majority of those below 15 years of age (76 %) were offered shared housing, staffed twenty-four hours a day, while the remaining children were placed in foster homes, either ordinary foster homes or among relatives (Bufdir, 2016). Children older than 15 years are typically offered group housing, with or without an adult leader, or other living arrangements, depending on the individual's need (IMDi, 2015). The municipalities organize the care for unaccompanied minors in a variety of ways, with different models for collaboration between the involved local authorities.

The largest groups of unaccompanied minors that applied for asylum in Norway in 2015 originated from Afghanistan, Eritrea, Syria, Somalia, Ethiopia and Iraq (UDI, 2016a). Out of these, the majority was Afghan boys (65%). Only eight percent of the unaccompanied minors who came to Norway in 2015 were girls. The majority of girls came from Eritrea (24%). Merely one percent of the girls had their background from Afghanistan. Most of the unaccompanied minors were between 15 and 17 years old when they arrived in Norway. Twenty percent were younger than 15 years old (UDI, 2016a).

According to a report from Statistics Norway, two out of three resettled unaccompanied refugees in Norway are either employed or in school after resettlement (Aalandslid & Enes, 2012). This number is below the rest of the population, yet the rate is increasing with age and length of stay in Norway. For those who have lived two years or more in Norway, the employment and education rate is the same as for refugees who came together with their parents (Aalandslid & Enes, 2012). Keles, Friborg, Idsøe, Sirin and Oppedal (2016b) carried out a longitudinal study targeting unaccompanied minors resettled in Norway. They categorized 60% of the youth in the sample as healthy or resilient. However, this also means that the remaining 40% retained or developed mental health problems, and thus constituted the vulnerable and clinical clusters.

The unaccompanied minors who participated in the project the present study is based on,

had all been granted residence and had resettled in Norway. As many of them were older than 18 years at the time of data collection, they were no longer minors. The participants will therefore be referred to as *unaccompanied refugees* in this report.

Acculturation Developmental Context

Characteristic for all refugee and immigrant background children and youth is that their development and adaptation takes place within at least two cultural domains, that of their heritage culture, and that of the receiving society, typically referred to as *acculturation*. One of the most frequently used definitions of acculturation is that it involves “the changes in cultural patterns that result when individuals from different cultures come into continuous direct contact” (Redfield, Linton, & Herskovits, 1936, p. 149). Psychological acculturation can be understood as the changes that an individual experience when culturally distinct groups are placed in first hand contact (Graves, 1967). This includes changes in identity, attitudes, values and behavior (Sam, 2006).

Children have remarkable capacities to adjust to the contextual and developmental demands they are facing, and some scholars have therefore argued that acculturation is better described as an integral part of their life span ontogenetic development, rather than as a separate process (Oppedal & Idsøe, 2015; Oppedal & Toppelberg, 2016). Acculturation development involves several domains that are common to all children, such as development of close adult and peer relationships, and some experiences that are unique to immigrant background children and youth, such as the necessity to develop dual language skills and exposure to ethnic prejudice and discrimination (Oppedal & Toppelberg, 2016). Thus, the multicultural context unaccompanied minors become part of upon arrival in their destination countries affects their cognitive, social and emotional development in many ways. Acculturation developmental contexts involve both protective resources that promote sociocultural integration and well-being, as well as various stressful experiences that increase the risk for mental health problems, among which daily hassles are prominent. The achievement of cultural competence within more than one cultural domain is a positive outcome of the acculturation process (Oppedal, 2006; Sam & Oppedal, 2003), while aspects of the acculturation-process, such as discrimination and ethnic identity negotiation, can increase the risk for mental distress (Oppedal, Røysamb, & Heyerdahl, 2005).

Berry, Kim, Minde and Mok (1987) pointed to a certain set of stress reactions among immigrants that was related to the acculturation process. This included lowered mental health status (i.e. depression, anxiety), additional psychosomatic symptoms, feelings of marginality, alienation and identity confusion. Many studies have confirmed that what they call “acculturative stress” is related to increased mental health problems in samples of immigrants and refugees (de Snyder, 1987; Ellis, MacDonald, Lincoln, & Cabral, 2008; Hovey & King, 1996; Sirin, Ryce, Gupta, & Rogers-Sirin, 2013), and that this stress contributes to aggravated psychological adjustment for immigrant youth and refugees (Ellis et al., 2008). Rudmin (2009), however, argued that acculturative stress is problematic to operationalize and that acculturative stress has become an umbrella term for all types of problems that minorities are facing.

In line with Keles, Idsøe, et al. (2016), we apply the term acculturation-related hassles when referring to daily stressors specific to children with immigrant or refugee background. To expand on the previous findings, the present study included the impact of pre-migration trauma and daily hassles on aggression, to gain information about their relative effect on various expressions of aggression.

Reactive and Proactive Aggression

Researchers recognize aggression to be a multidimensional construct, and many have sought to describe subtypes of aggression in order to find a workable definition (Hartup, 2005). Some researchers have proposed distinctions based on form, for example physical and non-physical aggression (Tremblay, 2000) or overt and relational aggression (Crick & Grotpeter, 1995). Others have proposed subtypes of aggression based on the underlying goal or function. Among them has the distinction between *reactive* and *proactive aggression* gained increased attention for several decades (Dodge, 1991; Dodge & Coie, 1987). This distinction aims to describe different functions of aggression.

Reactive aggression is rooted in frustration-aggression theory (Berkowitz, 1962, 1978; Dollard, Miller, Doob, Mowrer, & Sears, 1939), and is defined as an angry and defensive response triggered by perceived threat or frustration (Berkowitz, 1990; Crick & Dodge, 1996; Vitaro & Brendgen, 2005). Reactive aggression is often used as a synonym for angry, hot-blooded, impulsive, emotional or defensive aggression, and the emotion of anger is central in this type of aggression.

Proactive aggression is theoretically founded in social learning theory (Bandura, 1973, 1977). Crick and Dodge (1996) defined proactive aggression as “deliberate behavior that is controlled by external reinforcement” (p. 993). According to the theory, aggression is like all other social behavior, acquired through direct experiences and observational learning processes. Anticipated rewards motivate proactive aggression, and unlike reactive aggression, pleasure and stimulation are the central emotions experiences. Roland and Idsøe (2001) have argued that proactive aggression should be divided further, according to the goals the individual is seeking to achieve with the aggressive behavior. The first is *power-related proactive aggression*, in which domination, or power over others, motivates the aggressive behavior. The second is *affiliation-related proactive aggression*, in which being accepted and gaining affiliation with others are the goals of the aggressive behavior. Research has demonstrated that proactive affiliation-related aggression has been more strongly associated with bullying – a form of aggressive behavior – among immigrant youth compared to natives (Fandrem, Strohmeier, & Roland, 2009; Strohmeier, Fandrem, & Spiel, 2012). These findings pose question of whether immigrant youth might have a stronger need for affiliation, which more often motivates aggressive behavior.

Dodge (1991) hypothesized that proactive and reactive aggression have different etiology. Early experiences that promote anger, fear and hyperactivity might be a source of chronic reactive aggression. Regarding proactive aggression, Dodge (1991) proposed a different constellation of experiences. This included learning aggressive tactics, lack of learning nonaggressive tactics, as well positive reinforcement of aggressive behavior. Brendgen, Vitaro, Boivin, Dionne and Pérusse (2006) confirmed that reactive and proactive aggression are mostly influenced by socialization experiences.

Proactive and reactive aggression frequently co-occur within the same individual (Dodge, Lochman, Harnish, Bates, & Pettit, 1997), but seem to be associated with different outcomes. Findings have indicated that reactive aggression is related to social rejection (Dodge & Coie, 1987; Price & Dodge, 1989), negative affect and internalizing problems later in life (Card & Little, 2006; Fite et al., 2009; Vitaro et al., 2002), as well as a tendency to display a hostile attribution bias (Crick & Dodge, 1996; Dodge & Coie, 1987).

On the other hand, children who engaged in proactive aggression displayed more self-efficacy and expected more positive outcomes (Crick & Dodge, 1996; Smithmyer, Hubbard, & Simons, 2000). Research findings also showed that proactive aggression predicted delinquency

and disruptive behavior later in life (Atkins & Stoff, 1993; Raine et al., 2006; Vitaro, Gendreau, Tremblay, & Oligny, 1998).

Aggression and mental health. Aggression is associated with adverse outcomes, and findings have demonstrated an association between aggression and both depression and delinquent behavior (Vitaro et al., 2002). Aggression is not a clinical diagnosis, but associated with the oppositional defiant disorder and conduct disorder in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) (American Psychiatric Association, 2013). Proactive aggression shares similar features with conduct disorder in the DSM-V. This disorder mainly focuses on behaviors that violate the rights of others, violation of social norms and includes diagnosis criteria such as starting fights, bullying and theft (American Psychiatric Association, 2013). Research has demonstrated that unaccompanied minors hardly engage in conduct behavior such as criminal or anti-social activities (Oppedal & Idsoe, 2012).

Reactive aggression has similar features with the DSM-V diagnosis oppositional defiant disorder (American Psychiatric Association, 2013). The aggressive behavior in this diagnosis is often associated with emotional dysregulation, and includes symptoms like angry and irritable mood, and being easily annoyed and resentful. In relation to this, Stringaris, Zavos, Leibenluft, Maughan, and Eley (2012) are among some who have proposed that irritability is an underlying mechanism between oppositional problems and depression. Research targeting unaccompanied minors has found high levels of depressive symptoms (Oppedal & Idsoe, 2012).

Gender differences. Previous findings have indicated that boys display a higher level of proactive affiliation related aggression, proactive power-related aggression and reactive aggression, compared to girls (Fandrem et al., 2009; Strohmeier et al., 2012). However, Roland and Idsøe (2001) found that affiliation-related aggression was a better predictor of bullying for girls than for boys, while power-related aggression was a better predictor for boys. A meta-analytic review also suggested that gender differences in aggression might be a result of what is considered acceptable for males and females (Archer, 2004). This review revealed that males displayed more direct forms for aggression, while females displayed more indirect forms of aggression. This pattern was also found in non-Western countries, although cross-culture research was sparse. The review recognized many circumstances within the cultural perspective that could intensify gender differences in aggression. Unaccompanied refugees have various cultural backgrounds and are currently developing and adopting within another cultural domain.

Therefore, it is of interest to explore how the different genders express aggression in this group.

Aggression in this study. The present study is limited to focus on reactive aggression and proactive affiliation-related aggression, specifically. Forming relationships is an important developmental task for youth (cf. Erikson, 1980), and is also important for cultural integration and adaptation (Berry, 1997). Considering that some unaccompanied refugees may also lack affiliation in the family context, aggression may be a strategy to achieve affiliation. Many may also consider this type of aggression as more acceptable. The youth are in a situation where they are both self-reliant, yet dependent on others, which may make socially acceptable behavior beneficial (Oppedal & Idsoe, 2012).

This study also focuses on reactive aggression, the impulsive and emotional type of aggression. As noted, reactive aggression is associated with negative affect and depression (Fite et al., 2009; Vitaro et al., 2002), which is highly prevalent among unaccompanied minors (cf. Oppedal & Idsoe, 2012).

Predictors of Aggression

To obtain a better understanding of the experiences that impact aggression among unaccompanied refugees, we examined both exposure to trauma before resettlement, as well as various refugee - relevant stressors. This is to give a better indication of whether traumatic experiences before resettlement, or hassles after resettlement, impact aggression. To our knowledge, no researchers have so far investigated predictors of proactive affiliation-related aggression and reactive aggression among unaccompanied refugees.

Exposure to traumatic events. According to DSM-V (American Psychiatric Association, 2013), exposure to trauma is identified to include “exposure to actual or threatened death, serious injury, or sexual violence” (p. 271). The exposure can be experienced either directly or indirectly, such as witnessing or learning about the event. Trauma-related experiences can be time-limited and happen only once, such as exposure to a natural disaster, or they can be pervasive and chronic, such as living in war-zones (Perry, Pollard, Blakley, Baker, & Vigilante, 1995). Either way, such experiences can have impact on the individual’s emotional, cognitive, physiological, social and behavioral functioning. Physical hyperarousal or dissociation are some of the adaptive mental and physical responses to trauma, but can become maladaptive in the long run (Perry et al., 1995). This affects the neurodevelopmental pathway, and children are

especially vulnerable for these changes (Perry et al., 1995). It is also demonstrated that without adult support, children are especially vulnerable for traumatic reactions during and after exposure to trauma (Luby et al., 2013; Qouta, Punamäki, & El Sarraj, 2008; Thabet, Ibraheem, Shivram, Winter, & Vostanis, 2009).

Exposure to traumatic events affects mental health in many ways. In DSM-V, exposure to trauma is listed as a diagnostic criterion for trauma- and stress-related disorders, such as PTSD (American Psychiatric Association, 2013). Additionally, several studies have demonstrated that exposure to trauma was associated with internalizing mental health problems (Macksoud, Dyregrov, & Raundalen, 1993; Nolen-Hoeksema & Morrow, 1991; O'Donnell, Creamer, & Pattison, 2004; Shalev et al., 1998). This was also found among samples of unaccompanied minors (Oppedal & Idsoe, 2012). Other studies have demonstrated that exposure to traumatic events was related to externalizing mental health problems such as aggression and antisocial behavior (Guerra, Rowell Huesmann, & Spindler, 2003; Keresteš, 2006; Qouta, Punamäki, Miller, & El-Sarraj, 2008). Although the UNHCR (2005) has claimed that unaccompanied minors run an increased risk for exposure to traumatic events, the relation between exposure to traumatic events and aggression has been sparsely investigated among unaccompanied minors.

Traumatic events and proactive affiliation-related aggression. Previous studies have demonstrated an association between exposure to trauma and general proactive aggression (Hamner, Latzman, & Chan, 2015; Qouta, Punamäki, Miller, et al., 2008). In contrast to referred research, this is the first study to examine the relation between exposure to trauma and proactive affiliation-related aggression specifically. Considering that proactive aggression has its roots in social learning theory, some hypotheses can be made. Learning is central in this theory, and considering that many unaccompanied minors have experienced exposure to war and violence, such events may teach children aggressive scripts for survival. Aggression may serve as an intentional and adaptive strategy to gain control over unpredictable environments (Latzman & Swisher, 2005). Proactive aggression is also associated with children showing their independence and ensuring themselves and others that they can take care of themselves (Opotow, 2006), which can relate to the situation of unaccompanied refugees.

Traumatic events and reactive aggression. Research has demonstrated that many different categories of trauma, such as physical violence, natural disasters, war exposure or witnessing or being exposed to military violence, increase the risk of reactive aggression among

children (Dodge et al., 1997; Hecker, Fetz, Ainamani, & Elbert, 2015; Marsee, 2008; Qouta, Punamäki, Miller, et al., 2008). Dodge (1991) also suggested that early experiences that promote anger, fear and hyperactivity, such as growing up in a war zone, loss of a loved one, physical violence and disruption of security, are experiences that can increase the risk for reactive aggressive behaviors in children.

Post-migration hassles. The resettlement process can be challenging and stressful for the unaccompanied minors (Keles, Friborg, et al., 2016b). Many of their daily hassles and stressors can be uncontrollable, and can strain the individual's coping system (Keles, Friborg, et al., 2016a; Seglem et al., 2014). Stressful and irritable situations in daily life can trigger aggression (Hennessy & Wiesenthal, 1999), and it is of interest to explore if hassles related to post-migration experiences affect aggressive outcomes.

Daily hassles are "those irritating, frustrating, distressing demands that to some degree characterize everyday transactions with the environment" (Kanner, Coyne, Schaefer, & Lazarus, 1981, p. 3). Daily hassles can be separated into two types of hassles, *daily general hassles* and *acculturation-related hassles*, forming two major categories of daily hassles relevant for immigrants (Keles, Friborg, et al., 2016a). Both types of hassles are stressful, and can weigh heavy on the individual's coping system (Keles, Friborg, et al., 2016a).

Daily general hassles can be experienced by everyone, regardless of immigrant status (Keles, Friborg, et al., 2016a). These hassles can be related to school or workplace, conflicts with friends and family, economic strains, achievement-related worries and other worries in everyday life. Acculturation-specific hassles are related to one's immigrant status and belonging to an ethnic minority group, and can affect the individual's perception of identity, belonging and self-worth (Keles, Friborg, et al., 2016a). For many, these hassles can be perceived as outside the individual's control (Keles, Idsøe, et al., 2016).

Keles, Friborg, et al. (2016a) showed that unaccompanied minors resettled in Norway reported several daily general hassles and acculturation-specific hassles. Each dimension of hassles uniquely predicted depressive symptoms. In addition, Keles, Idsøe, et al. (2016) found that higher levels of acculturation-related hassles predicted an increase in depressive symptoms, whereas existing depressive symptoms increased the risk for future daily general hassles and the other way around, suggesting a reciprocal relation between daily general hassles and depression. Most people can cope with one strain, but when the strains accumulate, this will tax the

individual's coping system and can give rise to more symptoms of depression (Keles, Idsøe, et al., 2016). For the present study, we include three categories of acculturation-specific hassles that immigrant background children and youth are frequently experiencing, i.e. ingroup-hassles, out-group hassles and perceived discrimination. These should be systematically related to known features of the acculturation process (Berry et al., 1987). In this way, we can investigate which hassles that are related to the process of acculturation, and control for the effect of daily general hassles.

In-group hassles. In-group hassles are stressful events due to conflicts within the person's own ethnic group. For example, young people may be criticized because they do not observe cultural standards and cultural codes properly (Lay & Nguyen, 1998).

Out-group hassles. Out-group hassles involve frustrations related to problems with understanding Norwegian language, social norms and cultural codes, and can be defined as perceived or real difficulties in relation to majority group members (Lay & Nguyen, 1998). This distinction between out-group hassles and in-group hassles can reveal whether there are differences in perceived hassles from the various cultural contexts to which the youth belong. Few perceived hassles may indicate better adaptation.

Perceived discrimination. Discrimination is unfair treatment (Harrell, 2000). It includes a range of behavior, from offensive gestures, elevated suspicion, negative statements and excessive violence because of, e.g. cultural background (Oppedal et al., 2009). Perceived discrimination is understood in the same way as other psychosocial stressors, and systematic exposure to discrimination may have consequences for the individual's health (Cristini, Scacchi, Perkins, Santinello, & Vieno, 2011; Ellis et al., 2010; Finch, Kolody, & Vega, 2000; Oppedal, 2011; Ríos-Salas & Larson, 2015; Williams, Neighbors, & Jackson, 2003).

Literature related to discrimination has mainly concentrated on ethnic discrimination and racism, but refugees and immigrant youth may also be discriminated against because of religion, immigrant status or poverty (Ellis et al., 2010). Being discriminated against can create barriers when interacting with the host society for immigrants and refugees. For a person, integration and interaction with the host society can become difficult when being approached with negative messages regarding aspects of identity, ethnicity or gender. Rejection and unfairly treatment can contribute to insecurity and lower self-esteem for the individual (Cristini et al., 2011). These experiences might contribute to internalize negative perceptions of self, and thus might increase

the risk for depression (Ellis et al., 2008). Experiences of discrimination may also function as traumatic reminders. Many fled their country due to persecution of their ethnic and religious belonging, and repeated exposure might increase the harmful effect of discrimination (Ellis et al., 2008).

Acculturation-related hassles and aggression. Previous studies have found associations between acculturation and aggression (Smokowski & Bacallao, 2006). Smokowski and Bacallao (2006) studied aggression and acculturation (in terms of culture of origin and U.S cultural involvement) in Latino adolescents. They found significant associations between perceived discrimination, acculturation conflicts, parent-adolescent conflicts and aggression.

Out of the three acculturation-related hassles included in this study, perceived discrimination has been studied most frequently in relation to aggression. Researchers have found that discrimination is associated with risk for both minor and severe aggression (Borders & Liang, 2011; Hartshorn, Whitbeck, & Hoyt, 2012; Lau, Takeuchi, & Alegria, 2006; Simons et al., 2006; Smokowski & Bacallao, 2006). Mellor, Merino, Saiz, and Quilaqueo (2009) reported that the participants in their study felt angry and hurt when being discriminated against. The participants were likely to respond to the discrimination by protecting themselves, controlling themselves or confronting the victimizers. Hartshorn et al. (2012) found in a longitudinal study that perceived discrimination had a direct effect on aggression, as well as an indirect effect through anger. This seemed to accumulate over time and the authors implied long-term consequences for aggressive behavior.

Acculturation-related hassles and proactive affiliation-related aggression. High levels of acculturation-related hassles may put affiliation and belongingness at risk. The belongingness hypothesis posits that humans have a drive to form and maintain lasting, positive relationships with others (Baumeister & Leary, 1995). Experiencing many forms of rejections from members of both one's own ethnic group and the majority society may increase the need to search for belongingness, even if it involves behaving aggressively. Roland and Idsøe (2001) found that being bullied, which can be considered a form for rejection, was related to proactive affiliation-related aggression. However, the relation seemed to be contingent on age and gender.

Acculturation-related hassles and reactive aggression. No clear relation has previously been found between the selected acculturation-related hassles and reactive aggression. We assume that experiences of in-group hassles, out-group hassles and perceived discrimination will

cause frustration, which according to the frustration-aggression-theory leads to reactive aggression (Berkowitz, 1962, 1978).

Moral Disengagement

Research has demonstrated that proneness to moral disengagement increases the risk of aggression and violent behavior (Bandura et al., 1996; Caprara et al., 2014; Pelton et al., 2004; Shulman, Cauffman, Piquero, & Fagan, 2011). Aggression and morality are viewed as interrelated concepts (Tisak, Tisak, & Goldstein, 2006). Turiel (2006) stated “the essence of morality is the way people conceptualize issues of right and wrong based on their understanding of rights, justice, fairness and the welfare of people” (p. 9). Morality generally consists of two dimensions; prosocial behavior, in which actions are carried out to benefit others, and negative morality, which includes actions that violate the welfare and rights of others (Tisak et al., 2006). Aggression is a part of the negative dimension of morality (Tisak et al., 2006). This means that many moral violations also include aggression, and many aggressive acts are moral violations.

Theory of moral disengagement. Moral disengagement is a part of Bandura’s (1991a) social cognitive theory of moral thought and action that aims to conceptualize the relation between morality and aggression. This theory explains how moral reasoning translates into actions (Bandura, 1991a; Bandura et al., 1996). More specifically, moral reasoning translates into action through self-regulatory mechanisms, and this system is the basis for all purposeful and intentional actions. The self-regulation system adopts an interactionist perspective in which moral conduct is regulated by intrapsychic self-regulatory factors, as well as influenced by social influences that shape the nature of moral standards in a society (Bandura, 1991b).

Development of moral standards are central components in people’s self-regulatory system. These standards develop during socialization. People learn from others and evaluate social reactions when they and others exercise certain behaviors (Bandura et al., 1996). Once formed, they serve as guidelines for behavior, which is regulated by forethought. However, because people are constantly interacting with the environment, new moral standards can develop, and old standards are updated (Bandura, 1991b).

People self-monitor own behavior, anticipate its determinant and effects and evaluate these against own moral standards and environmental circumstances (Bandura, 1991a, 1991b). The anticipated social sanctions and internal self-sanctions give rise to self-reactions. These two

sources regulate transgressive behavior. Behavior in accordance to own moral standards will give a sense of self-satisfaction and self-worth, and violating may lead to negative affective self-reactions such as the moral emotions guilt and shame. In addition, people may refrain from a transgressive behavior because it will cause them social censure, or other adverse consequences. It is important to note that social sanctions and internal sanctions can have opposite influences on each other, as well as be complementary. Summarized, the self-regulatory system makes people act in accordance with their moral standards because of the anticipated self-reaction that the potential courses of action will give rise to.

Mechanisms of moral disengagement. Self-reactions must be activated for the person to act in accordance to moral standards (Bandura, 1991a). Moral disengagement allows people to selectively disengage moral control from moral conduct. Developmental scientists have identified eight disengagement strategies or practices, which operate on either the loci of the behavior, the agency, the outcome or the recipient (Bandura, 1991a; Caprara, Fida, Vecchione, Tramontano, & Barbaranelli, 2009). Figure 1 gives an overview over the mechanisms of moral disengagement. Through these various mechanisms, affective self-reaction such as the emotions of guilt and shame can be avoided, and own conduct made more tolerable.

Mechanism	Description
Loci of the behavior	
Moral Justification	The conduct is made personally and socially acceptable through cognitive reconstruction.
Euphemistic Labeling	The conduct is given a more desirable and acceptable appearance by masking it with different language.
Advantageous Comparison	The conduct is compared to inhuman events in order to make own act seem less destructive.
Loci of the agency	
Displacement of responsibility	Personal responsibility for the conduct is displaced elsewhere, e.g. originating from authorities or others.
Diffusing of responsibility	Convincing oneself that the conduct is a joint action and make individual contribution indistinguishable .
Loci of the outcome	
Disregarding or distorting of consequences	Ignoring, minimizing, distorting or disbelieving the harmful consequences of one's conduct.
Loci of the victim	
Attribution of blame	Convincing oneself that the victim is responsible for, or deserving of the action against them.
Dehumanization	The victim is viewed more like an object or less human. This deactivate the feeling of empathy perceived similarity usually activates, and thereby make it easier to mistreat the victim without personal distress.

Figure 1. A summary of the mechanisms of moral disengagement (Bandura et al.,1996).

Influences on moral disengagement and mediating effects. A large body of research has demonstrated that the surrounding environment can influence proneness to moral disengagement (Detert, Treviño, & Sweitzer, 2008; Hyde, Shaw, & Moilanen, 2010; Kiriakidis, 2007; Pelton et al., 2004). For example, Detert et al. (2008) found that people who believe that forces outside their control were responsible for the outcomes in their life, i.e. chance locus of control, were more likely to morally disengage. In addition to identifying different precursors, researchers have demonstrated the mediating role of moral disengagement, in which factors indirectly alter aggressive behavior through disengagement strategies (Hyde et al., 2010; Kiriakidis, 2007; Pelton et al., 2004).

Moral Disengagement as a Mediator

There are multiple factors that may place unaccompanied minors at risk for moral disengagement both before, during and after migration. Many refugees have fled from war-torn countries or have experienced war during their migration (Macksoud et al., 1993). Watching adults engage in aggressive behavior to achieve what they want may teach the children aggressive behavior as problem solving and alter their perception of right and wrong. During migration, resources are often scarce, and many may lack basic needs like food and shelter. In addition, communication might be difficult because of the many different languages they encounter. These factors could possibly promote disengagement strategies, like justifying own behavior, displacing responsibility for one's actions and so on. This is because the behavior is an option to obtain what one needs, and a strategy for survival. Finally, when arriving at their destination, many asylum seekers may feel like their future lies in the hand of a foreign government's asylum policy. This can possibly contribute to alter their perception of locus of control to a more chance-based locus of control orientation, which is a risk factor for moral disengagement (Detert et al., 2008). After resettlement, the youth must also adopt and understand new moral codes, and integrate according to the current set of rules from the integration authorities. The refugees may face hassles related to acculturation, which might challenge moral standards and possibly contribute to moral disengagement.

Exposure to trauma and moral disengagement. Children's and youth's exposure to violence and armed conflicts may have implications for moral socialization and development (Macksoud et al., 1993). Haskuka, Sunar, and Alp (2008) found a significant negative effect on

moral reasoning among students who had been exposed to war, compared to students who did not have these experiences.

Among the researchers targeting the effect of exposure to trauma on moral disengagement, Coker, Ikpe, Brooks, Page, and Sobell (2014) investigated the link between traumatic events and post-traumatic symptoms, problem-solving and moral disengagement. Their findings revealed an indirect association between traumatic stress and moral disengagement. As traumatic stress increased, social problem solving decreased, which again increased proneness to moral disengagement.

Ng-Mak, Salzinger, Feldman and Stueve (2002) offered a theoretical explanation on how violence, specifically, affects youth through the *normalization of violence* model. Their model explains how exposure to violence leads to emotional distress or other affective reactions. These reactions can lead to depressive symptoms or, alternatively, to pathologic adaptation to violence. Moral disengagement is one such pathologic adaptation. Summarized, the model proposes that moral disengagement serves as a coping strategy to deal with the emotional distress after experiences of violence, which further increases the risk for aggression.

Acculturation-related hassles and moral disengagement. In relation to discrimination, we can hypothesize that the experience of discrimination may make the individual prone to deviate from moral standards and promote a new understanding of right and wrong. This is in line with Fontaine, Fida, Paciello, Tisak, and Caprara (2014). Perren, Gutzwiller-Helfenfinger, Malti, and Hymel (2012), however, assumed two developmental trajectories depending on how aggressive the victim of bullying or peer rejection was. Victimized children who also showed aggressive tendencies were more prone to accept violations of moral rules. On the other hand, victims of bullying who were not aggressive, would be more sensitive to norms of fairness and showed more empathy towards a hypothetical victim. The latter group did not show any tendency to moral disengagement. In other words, Perren et al. (2012) demonstrated a complex relation between bullying and moral disengagement, depending on the individual's proneness to aggression after being bullied. To our knowledge, this is the first study to investigate if and how in-group hassles, out-group hassles and perceived discrimination affect aggression indirectly through moral disengagement in a sample of youth who have been exposed to a variety of stressors involving exclusion and violence.

The Present Study

Aggression among unaccompanied refugees resettled in Norway has not been investigated before. The present study will contribute to narrowing this knowledge gap. We focused on reactive and proactive affiliation-related aggression to identify and obtain additional knowledge about the different functions of aggression.

To obtain a better understanding of unaccompanied refugees, this study included both pre-migration and post-migration stressors, as recommended by Miller and Rasmussen (2010) and Huemer et al. (2009). Exposure to trauma was included as a predictor of aggression for the pre-migration perspective. For post-migration experiences, this study targeted acculturation-related hassles (in-group hassles, out-group hassles and perceived discrimination), separated from daily general hassles.

We also investigated how moral disengagement affected the relation between exposure to trauma and aggression, as well as the relation between acculturation-related hassles and aggression. Knowledge about how specific factors affect moral disengagement, and further relate to two functional forms of aggression can complement research about the role of moral disengagement on aggressive behavior.

The study aims to enhance knowledge about factors that contribute to the arising and/or persistence of psychological problems among unaccompanied refugees, with an emphasis on aggression and moral disengagement. To lessen the knowledge gap concerning aggression in this group is of utter importance for politicians, social workers, clinicians and the youth themselves, and could hopefully contribute to improve health services and the overall situation for unaccompanied refugees resettled in Norway.

The overall aim of this study is to acquire deeper knowledge about aggression among youth who came to Norway as unaccompanied minor asylum seekers. More specifically, we investigated if:

- 1) ... there are gender differences in reactive and proactive affiliation-related aggression
- 2) ... exposure to trauma and experiences of acculturation-related hassles predict reactive and proactive affiliation-related aggression
- 3) ... moral disengagement mediates potential associations between the stressors and reactive and proactive affiliation-related aggression

Method

Sample

The data used in this study were provided by the “Youth, Culture, and Competence Study” (YCC), a research program at the Norwegian Institute of Public Health (NIPH). The present study employed data from a prospective longitudinal project about unaccompanied refugees after resettlement in Norway. Four waves of data were collected from the period 2006 to 2012. The present study was cross-sectional and based on data provided by 580 participants who completed the second wave in 2011.

The sample frame of the YCC-study was all the unaccompanied minor asylum seekers who had been granted residence between 2000 and 2010, and were older than 13 years when their asylum application was approved. However, a couple of children below the age limit who asked to participate were included, as the research team members perceived them as mature and with good language proficiency.

The Regional Committee for Medical and Health Research Ethics (REK) and the Norwegian Data Inspectorate approved the project. After approval, The Norwegian Directorate of Immigration (UDI) provided a list of unaccompanied refugees who complied with the inclusion criterion. According to UDI, 4208 unaccompanied refugees were resettled in Norway between 2000 and 2010, making this the target population. This list also included information about gender, birth date, country of origin, date of arrival and date of resettlement in Norway.

Based on available funding, unaccompanied refugees who were resettled in 41 municipalities all over Norway were targeted for inclusion in the project ($N = 2654$). Representing all five regions in Norway, both urban and rural, as well as inland and coastal communities, the selected municipalities resettled high numbers of unaccompanied refugees. However, 969 individuals were not possible to identify, and an additional 476 individuals were not possible to reach. Thus, 1209 persons were identified and invited to the project.

Local resettlement authorities were contacted and informed about the project, and contributed to inform the unaccompanied refugees in their municipalities about the project. The potential participants ($N = 1209$) received a letter inviting them to participate in the study, followed by a phone call. Out of these, 78 % accepted ($n = 948$), four percent said no ($n = 43$), and 18 % initially accepted, but did not attend for various reasons ($n = 218$). All participants gave their written consent to participate in the study. For those below the age of 16, their legal

guardians also signed the consent forms.

Second Wave Participants

Out of the original sample, 580 youth participated in the second wave of data collection. This was 63 % of the first wave sample, and the participants had either completed the first wave or were recruited for the second wave. When comparing demographic characteristics of the participants from the first and the second wave, no significant differences emerged, except for age and length of stay in Norway (Keles, Friberg, et al., 2016b).

In the present study, we excluded three participants because they had not answered any items in the questionnaire, hence $N = 577$. Eighty-two percent were males ($n = 474$) and 18 % were females ($n = 103$). This corresponds to the gender distribution among unaccompanied minors living in Norway in 2013 (Statistics Norway, 2013). The participants came from 23 different countries. Fifty percent of the participants originated in Afghanistan, 11 % came from Somalia, seven percent from Iraq, and seven percent from Sri Lanka. The remaining 25 % of the participants came from various nationalities and were grouped together as “others” (see Appendix A for a complete list). These major nationalities reflected the general trend in arrivals of unaccompanied minors coming to Norway during the same period as the data collection took place (Wiggen, 2014). We can therefore assume that the distribution of participants did not significantly differ from the general population of unaccompanied refugees resettled in Norway.

The age of participants ranged from 12.50 to 29.11 years. This age range is considerable, and it emphasizes the fact that the group included both children, youth and adults at the time they answered the questionnaire. The mean age of the sample was 20.09 ($SD = 2.61$). On average, the participants had been resettled in Norway for 4.63 years ($SD = 2.40$). At the time of data collection, 47 % of the youth lived alone, 26 % lived in a group house with or without an adult leader, 16 % lived with family or spouse, and the remaining 11 % lived in foster care or other living arrangement.

Procedures

The youth who agreed to participate were gathered in groups in their local communities. Trained research assistants were present and helpful while they filled in self-report questionnaires with questions relevant to their psychosocial adaptation and mental health. The

research assistants had standardized protocols with explanations of difficult words and English translations of core concepts available. Translators who could read the questions in the participants' mother tongue were available for those who needed it, but none of the participants requested an interpreter in the second wave of data collection. The participants spent approximately 1.5-2 hours completing the questionnaire, and received a 100 NOK gift certificate for their participation.

Measures

Reactive and proactive aggression. The aggression scale by Roland and Idsøe (2001) included 14 items and was designed to measure three dimensions of aggression; reactive aggression, proactive affiliation-related and proactive power-related aggression. The present study only included the items measuring reactive aggression (ReAgg) and proactive affiliation-related aggression (ProAffAgg).

The participants checked how often they engaged in different types of aggressive behaviors on a Likert type scale ranging from *never* (1) to *very often* (5).

Six items measured reactive aggression, and included items such as "if I lose when playing a game, I get angry" and "I get angry easily". Cronbach's alpha was .71, which is considered an acceptable reliability (Cronbach, 1951).

Four items measured proactive affiliation-related aggression, such as "I feel like we become friends when we tease someone" and "I go along with things that are wrong to be in with others". Cronbach's alpha was .53, which is considered low. By excluding one item ("I feel that we become friends when we shut someone out"), Cronbach's alpha increased to .58. This is still low, but within acceptable range and can be due to few items (Cortina, 1993).

We then computed *mean sum scores*. This means that we summed up each of the participants scores across all items of the scale, both reactive and proactive affiliation-related aggression, respectively. All the participants received an average score for that scale based on their answers in each scale. These scores ranged from 1 (*never*) to 5 (*often*).

Moral disengagement. Moral disengagement was measured by 12 items of the original 32 item Moral Disengagement Scale (Bandura et al., 1996).

In the adapted scale (MD-scale), all items from the original subcategory *moral justification* were included, one out of four items targeted *euphemistic labeling*, two out of four

items measured *displacement of responsibility*, three out of four targeted *distorting consequences* and two out of four items of *attribution of blame* were included.

The participants checked how much they agreed to each statement on a 3-point Likert type scale ranging from *disagree* (1) to *agree* (3), and items included statements such as “it is alright to fight to protect your friends”, “it is okay to tell small lies because they don’t really do any harm” and “it is alright to beat someone who bad mouths your family”. The overall Cronbach’s alpha for the adapted version was .76. The participants received a mean sum score, ranging from 1 (*low moral disengagement*) to 3 (*high moral disengagement*).

Exposure to traumatic events. This scale was based on the *Stressful Life Event Scale* by Bean, Derluyn, Eurelings-Bontekoe, Broekaert and Spinhoven (2006), and involved eight traumatic life events common among young refugees. The participants checked whether they had experienced each event by answering *yes* or *no* to eight dichotomous questions. The individuals received a sum score (0-8) according to how many events they had experienced. These events included experiences of war first hand (79%), life threatening illness (19%), catastrophes such as fire, earthquake or hostage situations (19%), physical maltreatment of self (40%), physical maltreatment seen happen to others (57%), other frightening events involving great danger (56%), event where others were in great danger (52%), and loss of a parent (44%). This scale was a formative measure, meaning that the items in the scale are not expected to share a common theme or correlate (Coltman, Devinney, Midgley, & Venaik, 2008). Hence, Cronbach’s alpha was not measured.

Post-migration hassles. The following four scales were developed for the YCC-project at the Norwegian Institute of Public Health, and were a part of the Youth, Culture and Competence Hassles Battery (see Keles, Friborg, et al., 2016a).

In-group hassles. The in-group hassles scale included three statements about problems and conflicts within the participants’ own ethnic groups. The participants were asked to respond how many times they had experienced the episode described in each statement the last year ranging from *never* (1) to *very often* (4). For example, “You were criticized by co-ethnics because you did not dress properly”. Cronbach’s alpha was .69. The participants received a mean sum scores, ranging from 1 (*rarely*) to 4 (*frequently*).

Out-group hassles. This scale had the same design as the in-group hassles scale, and consisted of three items measuring hassles and frustration related to adapting to a Norwegian

context, such as “You have been frustrated because you did not understand the Norwegian way of thinking and behaving”. Cronbach’s alpha was .67. The participants received mean sum scores, which ranged from 1 (*rarely*) to 4 (*frequently*).

Perceived discrimination². This scale included five items measuring various degrees of perceived discrimination during the last year. The scale was originally obtained from the Immigrant Adolescent Questionnaire (Berry, 2006), which was a part of the International Study of Ethnocultural Youth (ICSEY). The items had been translated into Norwegian for the Norwegian part of ICSEY. The participants checked how much they *disagreed* (1) to *agreed* (4) on various statements, such as “I feel that people from other cultures do not accept me” and “I have been teased and insulted because of my cultural background”. Cronbach’s alpha was .76. The participants received mean sum scores, ranging from 1 (*rarely*) to 4 (*frequently*).

Daily general hassles. This scale included 15 items measuring four individual dimensions: *worries about economy* (two items), *achievement-related worries* (two items), *conflicts within social network* (four items) and *worries about social network members* (seven items). The scale was treated like a reflective scale measuring the latent construct of daily general hassles. The participants checked how often they had experienced each hassle during the last year, from *never* (1) to *very often* (4). One item was deleted to increase reliability (“concerns because someone in my family drinks too much alcohol”). The Cronbach’s alpha for the overall scale was .74. The participants received a mean sum score ranging from 1 (*rarely*) to 4 (*frequently*).

Statistical Approach

We carried out conventional analyses using SPSS, version 23, and the mediation analyses were carried out using the SPSS macro *Process* (Hayes, 2016).

Process is a tool for path analysis-based moderation- and mediation analyses, applying bootstrapping method. In this study, estimates were based on 5000 bootstrap samples. Process allows us to test *total, direct and indirect effects*. According to Hayes and Little (2013), the total effect is the effect that an independent variable (X) has on a dependent variable (Y), similar to a bivariate correlation. The direct effect is the effect of X on Y that is left when a third variable, a

² Due to space-limitation, perceived discrimination will be referred to as “discrimination” in tables and figures in the result section.

mediator (M), is included in the model. Indirect (mediated) effects occur when X is transmitted to Y through M, and can be considered a causal relation (Hayes & Little, 2013). This is referred to as mediation. The indirect effect can be either full, i.e. the entire effect of X on Y is mediated by M, and the direct effect results non-significant, or partial, i.e. some of the effects of X on Y is mediated by M.

Assumptions required for the parametric tests of the study. We examined the scales for potential violation of assumptions of linearity, normality, homoscedasticity and independence (Field, 2013). We found that assumptions were met, except in the proactive affiliation-related aggression scale, where heteroscedasticity was present. Heteroscedasticity can create bias and inconsistency in the standard error associated with the parameters in a model, as well as affect significant testing (Field, 2013). However, Process offers an alternative approach for estimating standard errors if an unknown form of heteroscedasticity is present. See Hayes and Cai (2007) for more details. We applied this approach to overcome the violation of the assumption of homoscedasticity. In addition, the bootstrapping method was applied to ensure normality in the scales.

Missing data. Missing data for the individual items ranged from 0 to 28.3%. We investigated patterns of missing data (see Appendix E). The results from the investigation indicated that the missing data pattern was at random (MAR). Nevertheless, there were indications that non-responses could be due to language difficulties, length of stay or sensitive content. The implications of language difficulties and length of stay could be that the results instead reflect a narrower group, for example those who are most integrated in the Norwegian society.

Missing data due to sensitive content may cause inaccurate or lower effects. However, a translator was available for the participants, and the research team repeatedly explained about confidentiality. Considering the background and situation of the sample, we considered the amount of missing data acceptable.

We replaced missing values using the Expectation Maximization method (EM), and conducted EM estimates on each subscale separately to retain as much information as possible in subsequent analyses. To ensure that the imputed data were valid, we compared the results from analyses conducted with EM-values with analyses conducted with mean sum scores. In the latter, participants who had responded to more than half of the items in the scale, received an average

score based on the answers in each scale, while those who had answered less than half of the items in the scale, were excluded from the analyses. No major differences emerged, and we concluded that the EM-imputed values were valid.

Factor analyses of the included scales. Some of the included scales consisted of subdimensions. To ensure that the different items clustered in the intended subdimensions, we conducted principal axis factor analyses.

In the aggression scale, the factor analysis showed support for the binate structure, i.e. that the items measuring reactive aggression clustered in one factor, and the items measuring proactive affiliation-related aggression clustered in another factor. For a detailed report of the exploratory factor analysis, see Appendix B. Previous research using the scales, in addition to the subdimension of proactive power-related aggression (which was excluded here) demonstrated a three-factor structure when applying a confirmatory factor analysis (Fandrem et al., 2009; Roland & Idsøe, 2001).

In the moral disengagement scale, the result of the factor analysis did not show a clean structure, see Appendix C. Therefore, we conducted a new analysis and investigated if the items loaded on one factor (see Table C2, Appendix C). All items loaded above .30, and we applied moral disengagement as one construct for the purpose of this study.

For daily general hassles scale, the factor analysis showed that the items clustered around the factors that they were intended to (see Appendix D). Keles, Friberg, et al. (2016a) have confirmed the structure in the same scale using confirmatory factor analysis.

Analysis

We carried out the main analyses in two steps to cover the research questions. First, gender differences were examined with independent sample t-tests. As a second step, we carried out one mediation analysis for each of the individual predictors on the two aggression outcome variables, eight analyses altogether. This was done to investigate the total effects that the predictors have on the outcome variables, as well as the direct and indirect effects (i.e. when moral disengagement is included in the model). For each analysis, age, length of stay and daily general hassles were added as control variables. We also controlled for the remaining predictors. That is, for each analysis, control variables included background information, daily general hassles and the three predictors that were not part of the analysis, either perceived discrimination,

in-group hassles, out-group hassles or exposure to trauma. In this way, only the unique effect of the predictor's relation to aggression emerged. To obtain information about r^2 for the effect of each of the variables on reactive and proactive affiliation-related aggression, respectively, we ran the mediating analysis stepwise. We included one variable at the time, so that we first got the R^2 for the covariates, and accordingly information about R^2 change as we added the other predictors. Information about R^2 , R^2 change, and the effect of each of the included variables for the models, are presented in Appendix G.

We transformed all variables into standardized z-scores before the analyses to ease the interpretation of the parameter estimates in terms of effect sizes.

Results

Preliminary analyses

Unaccompanied refugees resettled in Norway have various backgrounds. Appendix F displays results from multiple ANOVAs conducted to investigate how different background characteristics (age, length of stay and county of origin) affected the main variables, reactive aggression and proactive affiliation-related aggression. Summarized, no significant differences emerged due to age, but some differences due to length of stay were evident (see Table F1). However, in accordance with previous research by the YCC research team (Keles, Friborg, et al., 2016a; Keles, Idsøe, et al., 2016), we controlled for both age and length of stay because of the relatively strong correlation between the two variables ($r = .80$).

For country of origin, the one-way ANOVA indicated different group means in proactive affiliation-related aggression, $F(4, 576) = 4.14, p = .01$. No significant differences were found in reactive aggression. The differences that emerged in proactive affiliation-related aggression suggest a possible need to control also for national background. However, this was not realistic, as the numbers of participants in each national group were often small. In accordance with previous studies, we included the total sample in the present study, without analyzing potential national group differences (Keles, Friborg, et al., 2016a; Keles, Idsøe, et al., 2016; Oppedal & Idsøe, 2012; Oppedal & Idsøe, 2015; Seglem et al., 2014).

Descriptive Statistics and Correlations Between Variables

Table 1 presents descriptive statistics, such as means, standard deviations and range of the individual scales, in addition to correlations between all the study variables. The participants reported low levels of both proactive affiliation-related aggression ($M = 1.79$, $SD = .76$) and reactive aggression ($M = 2.46$, $SD = .68$). Based on information about the standard deviation we calculated that 68 % of the sample had a score on the MD-scale between 1.26 and 1.9 in a scale ranging from 1 to 3. This means that most of the participant reported low levels of moral disengagement. Among the predictors included in this study (exposure to trauma, and the three acculturation-related hassles), the participants reported being exposed to on average 4 out of 8 traumatic events ($M = 4.03$, $SD = 1.96$). They reported most hassles related to their out-group ($M = 2.11$, $SD = .66$), and fewest hassles related to their in-group ($M = 1.55$, $SD = .66$).

The results indicated a moderate correlation between the two types of aggression, $r(575) = .30$, $p < .001$. Overall, all predictors only weakly correlated with both types of aggression. Pearson's r varied from $-.01$ to $.30$. Among them, the strongest correlation was between perceived discrimination and reactive aggression, $r(575) = .30$, $p < .001$. Surprisingly, there was no correlation between exposure to trauma and proactive affiliation-related aggression $r(575) = -.01$, $p = .88$. The weakest correlation was between exposure to trauma and reactive aggression, $r(575) = .08$, $p = .05$, which due to the sample size, reached a significant level. It is worth noting that reactive aggression and daily general hassles (which was included as a control variable in this research design), had the strongest correlation among all the included variables, $r(575) = .39$, $p < .001$.

Table 1

Basic characteristics of the sample (N = 577) and correlations among all the included variables.

	1	2	3	4	5	6	7	8	9	10
1. ProAffAgg ^a	-									
2. ReAgg ^b	.30**	-								
3. MD-Scale ^c	.26**	.18**	-							
4. Trauma exposure ^d	-.01	.08*	.09*	-						
5. In-group hassles ^e	.21**	.19**	.14**	.07	-					
6. Out-group hassles ^f	.16**	.22**	.13**	.04	.29**	-				
7. Discrimination ^g	.22**	.30**	.28**	.12**	.34**	.23**	-			
8. General hassles ^h	.17**	.39**	.29**	.20*	.31**	.37**	.31**	-		
9. Length of stay ⁱ	.13**	-.10*	-.11*	.06	-.08*	.18**	.07	-.14*	-	
10. Age ^j	-.09*	-.08	-.10*	.12**	-.07	-.07	.07	-.06	.80**	-
Mean	1.79	2.46	1.58	4.03	1.55	2.11	1.80	2.01	4.62	20.01
Standard deviation	.76	.68	.32	1.96	.61	.66	.66	.41	2.38	2.58

Note. Letters indicate range³ in the scales, ^a=1-4.33, ^b=1-5, ^c=1-2.83, ^d= 0-8, ^e=1-4, ^f=1-4, ^g=1-4, ^h= 1.14-3.43 ⁱ=1.63-13.18, ^j= 12.50-29.11

* $p < .05$, ** $p < .02$

Gender Differences

We applied independent sample t-tests to investigate gender differences in aggression. There was a significant gender difference in proactive affiliation-related aggression, $t(575) = 2.49, p = .01$. Males reported on average higher levels of proactive affiliation-related aggression ($M = 1.82, SD = .75$) than females ($M = 1.62, SD = .76$). The effect size was small, Cohen's $d = .27$. The t-test revealed no significant gender difference in reactive aggression.

³ In some of the scales, participants received a mean sum score that was either the minimum or maximum possible score. An investigation suggested that the number of participants who received a maximum mean sum score ranged from 1-9 on the various scales. However, it was the same participants who received a maximum score each time. The number of participants who received a minimum sum score on the different scales varied from 9 - 209 in the different scales. Due to this variation, we did not exclude any of the participants from the main analyses

Predictors of Aggression and Mediating Effect

Proactive affiliation-related aggression. The results from the individual mediating analysis showed that exposure to trauma did not significantly predict proactive affiliation-related aggression. Among the acculturation-related hassles, only in-group hassles, $\beta = .12$, $t(568) = 2.43$, $p = .02$, and perceived discrimination, $\beta = .16$, $t(568) = 3.45$, $p < .001$ predicted proactive affiliation-related aggression. Out-group hassles did not. See Appendix G for an overview of explained variance as well as significant and non-significant beta-coefficients for the effect of the remaining predictors and control variables on proactive affiliation-related aggression.

Mediating effects. Although in-group hassles significantly predicted proactive affiliation-related aggression, the result showed that moral disengagement did not mediate the relation. This is illustrated in Figure 2.

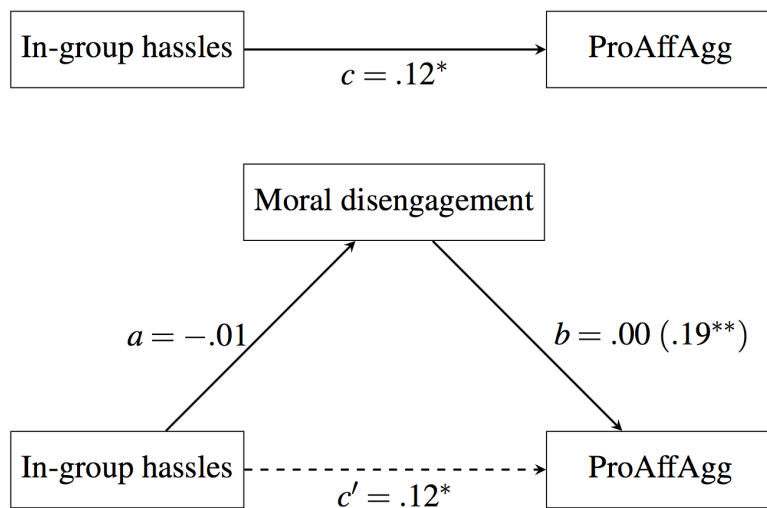


Figure 2. Illustration of the mediation model of effects of in-group hassles on ProAffAgg, with no mediating effect of moral disengagement. c : total effect; c' : direct effect; b : indirect effect ($c - c'$); parenthesis: betacoefficient of MD on ProAffAgg; a : betacoefficient of in-group hassles on MD.

* $p < .05$, ** $p < .001$

The results from the mediating analysis indicated that the only significant variable with an indirect effect on proactive affiliation-related aggression through moral disengagement was perceived discrimination, $\beta = .04$, 95 % BCa CI [.02, .07]. Figure 3 illustrates the relations. As shown, the mediation effect was only partial, thus the direct effect was still significant after the mediator was included. As a reminder, the indirect effect emerged after we controlled for background variables, daily general hassles, in-group hassles, out-group hassles and exposure to trauma. The overall model, including moral disengagement, explained 13% of the variance in proactive affiliation-related aggression, $R^2 = .13$, $F(8,568) = 9.79$, $p < .001$

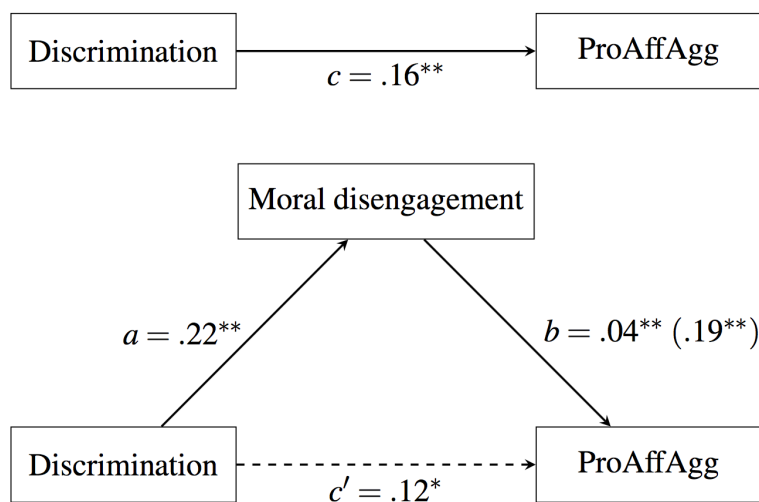


Figure 3. Illustration of the mediation model of effects of discrimination on ProAffAgg partially mediated by MD. c : total effect; c' : direct effect; b : indirect effect ($c - c'$); parenthesis: betacoefficient of MD on ProAffAgg; a : betacoefficient of discrimination on MD.

* $p < .05$, ** $p < .001$

Reactive aggression. Exposure to trauma did not significantly predict reactive aggression. Among the acculturation-related hassles, only perceived discrimination significantly predicted reactive aggression. $\beta = .20, p < .001$. Appendix G presents an overview of significant and non-significant beta-coefficients as well as R^2 of the covariates and the remaining predictors of the total effects of discrimination on reactive aggression.

Mediating effects. As shown in Figure 4, the result indicated that moral disengagement did not significantly mediate the relation between perceived discrimination and reactive aggression. In combination, all the variables explained 20% of the variance in proactive affiliation-related aggression, $R^2 = .20, F(8,568) = 15.62, p < .001$

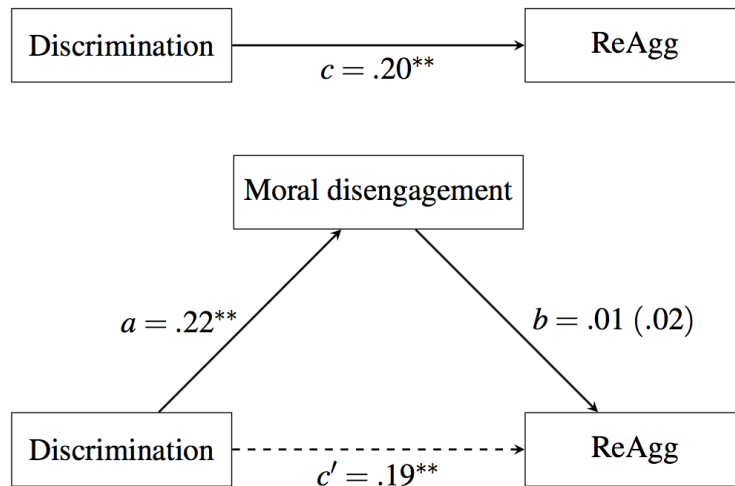


Figure 4. Illustration of the mediation model of effects of discrimination on ReAgg, with no mediating effect of moral disengagement. *c*: total effect; *c'*: direct effect; *b*: indirect effect (*c-c'*); parenthesis: betacoefficient of MD on ReAgg; *a*: betacoefficient of discrimination on MD.

** $p < .001$

Discussion

The overall aim of this study was to acquire deeper knowledge about aggression among youth who came to Norway as unaccompanied minor asylum seekers. We have focused on reactive and proactive affiliation-related aggression. In line with researchers' recommendations, we applied a pre- and post-migration framework (Huemer et al., 2009; Miller & Rasmussen, 2010). This included exposure to trauma before resettling in Norway as well as selected acculturation-related hassles relevant for immigrants and refugees after resettlement. Overall, the unaccompanied refugees who participated in this study reported low levels of aggression, and the combined effect of the variables explained variance in aggression to a somewhat low extent.

Given the cross-sectional design, the results from the three research questions concerning this group of unaccompanied refugees are summed up as following: 1) Males reported higher levels of proactive affiliation-related aggression compared to females, while males and females did not significantly differ in expressed reactive aggression. 2) Among the predictors, perceived discrimination predicted both reactive aggression and proactive affiliation-related aggression. In-group hassles significantly predicted proactive affiliation-related aggression, but not reactive aggression. Neither exposure to trauma nor out-group hassles were significant predictors of the two types of aggression. 3) The only mediated effect of moral disengagement was between perceived discrimination and proactive affiliation-related aggression, and the mediation was partial. Research on aggression in this group has been sparse, and findings derived from this study can contribute to additional understanding about their psychological well-being and adaptation in the Norwegian society.

Aggression Among Unaccompanied Refugees

Levels of aggression. The participants reported on average low levels of aggression. Oppedal and Idsoe (2012) suggested that unaccompanied refugees are in a situation where they are both self-reliant and dependent on help from others. This might suppress aggressive outcomes and reinforce emotion regulation to handle aggression in a way that minimizes chances for trouble. Similarly, Derluyn and Broekaert (2007) proposed that avoiding misbehavior is one of many hard struggles that the unaccompanied minors face in order to reach a new future. In other words, being aggressive might not be particularly adaptive for this group. For most people, the best way to achieve goals is through socially acceptable behavior.

Proactive affiliation-related and reactive aggression. The participants expressed significantly more reactive aggression, the impulsive and defensive type triggered by anger, compared to proactive aggression, which is the instrumental type motivated by affiliation. This is in line with other studies conducted on immigrants and native youth where reactive aggression was more common compared to proactive affiliation-related aggression (Fandrem et al., 2009; Strohmeier et al., 2012).

Roland (2002) suggested that affiliation increases if members of a group do aggressive acts towards someone outside the group. Low levels of proactive affiliation-related aggression among unaccompanied refugees may indicate that aggression is not a predominant strategy to gain affiliation, although they are, arguably, in a context in which forming relationships and gaining acceptance among peers are important developmental tasks. Proactive aggression is also assumed to be associated with the diagnosis conduct disorder. Therefore, low levels of reported proactive aggression may correspond to previous research, which demonstrated that unaccompanied refugees hardly engage in conduct problems such as criminal or anti-social activities (Derluyn & Broekaert, 2007; Oppedal & Idsoe, 2012).

In comparison, the participants reported higher levels of reactive aggression. This can be understood in light of that this type of aggression is more associated with emotional dysregulation, negative affect and internalizing problems (Card & Little, 2006; Fite et al., 2009; Vitaro et al., 2002). Previous research has demonstrated that the prevalence of depressive symptoms among unaccompanied minors is remarkably high and close to the suggested clinical cut-off (Derluyn & Broekaert, 2007; Oppedal & Idsoe, 2012). It might be that reactive aggression and depression share some underlying mechanism, which can relate to Stringaris and colleagueus's (2012) finding that irritability is an underlying mechanism behind depression and oppositional problems. We can only speculate if unaccompanied refugees display more reactive aggression because of their depressive symptoms.

It is worth noting that proactive and reactive aggression are found to frequently co-occur within the same individual (Dodge et al., 1997). Brendgen et al. (2006) demonstrated that the overlap between reactive and proactive aggression can be explained by one underlying mechanism of aggression. Therefore, it may be that the two types of aggression are different expressions of the same underlying aggression that is applied in different situations. Proactive affiliation-related aggression may reflect a collective form of aggression, in which people do

badly together. On the other hand, reactive aggression is a reaction to frustration performed individually. In this view, the findings may reflect that it is more common to enter situations in which aggression is expressed as an individual response to frustration, compared to situations where aggression is performed collectively.

Gender differences in aggression. The research findings demonstrated higher levels of proactive affiliation-related aggression among males compared to females. This is consistent with other studies conducted on immigrants and natives (Fandrem et al., 2009; Strohmeier et al., 2012). However, Roland and Idsøe (2001) found that proactive affiliation-related aggression was a better predictor of bullying, a form for aggressive behavior, among females compared to males.

No significant gender difference emerged in reactive aggression. This could mean that both genders are equally prone to respond to frustration with aggression. The finding contradicts other research, demonstrating that immigrant boys had higher levels of reactive aggression compared to females (Fandrem et al., 2009; Strohmeier et al., 2012). However, another study showed low magnitude of gender differences in reactive aggression (Little, Henrich, Jones, & Hawley, 2003), and a study conducted on a clinical sample did not find any gender differences at all (Connor, Steingard, Anderson, & Melloni Jr, 2003). One explanation might relate to Oppedal and Idsøe's (2012) finding, which demonstrated that female unaccompanied refugees reported significantly higher levels of depression compared to the males. Knowing that depression and reactive aggression may share similar features, clinical levels of depression may contribute to explain why females display higher levels of reactive aggression than expected.

The result concerning gender differences may also be due to the unique sample in this study. On the individual level, it is possible that only the toughest females fled their countries and made the journey to Norway. Reactive aggressive strategies may be adaptive during their journey, in which impulsive and defensive responses to threat may serve as a survival strategy.

From a cultural perspective, most of the participating females were from African countries. Culture may be an important determinant of aggression, and research has also demonstrated that cultural orientations influence aggression (Forbes, Zhang, Doroszewicz, & Haas, 2009; Li, Wang, Wang, & Shi, 2010). Most research is conducted in Western countries (Henrich, Heine, & Norenzayan, 2010). Hofstede (2001) listed most of Western countries as valuing individualistic cultural orientations, whereas he listed African countries with stronger collectivistic cultural orientations. Although few studies have investigated how culture affects

proactive and reactive aggression specifically, research has suggested that these types of aggressive behavior are mostly influenced by socialization experiences (Brendgen et al., 2006). This indicates that culture should not be overlooked in future investigations of aggression in culturally diverse samples. However, our finding is important to note, because displaying atypical aggression in the resettlement country may pose risk for these females. Crick (1997) found that atypical aggression was related to significantly more maladjustment among youth.

Predictors of Aggression

Acculturation-related hassles. Among the acculturation-related hassles, the participants reported on average highest levels of hassles related to their out-group and lowest levels of hassles related to their own in-group. The level of perceived discrimination in this group is similar to immigrant adolescents in Norway (Oppedal, 2011).

Perceived discrimination was the most consistent predictor of aggression, as it significantly predicted both reactive and proactive affiliation-related aggression. In-group hassles only significantly predicted proactive affiliation-related aggression. We speculate whether this is to strengthen their already existing relationships when their in-group belonging is threatened.

In order to understand the mechanism behind the acculturation-related hassles, it is of interest to investigate what the different hassles are representing. Keles, Idsøe, et al. (2016) suggested that acculturation-related hassles apply saliently to the individual's self-perception, such as identity, belongingness, cultural heritage and self-worth, thereby increasing stress reactions in relation to these hassles. Additionally, acculturation-related hassles can be perceived as being outside the individual's control (Keles, Idsøe, et al., 2016). Sue (2010) argued that ambiguous, unclear and uncontrollable stressors are perceived as more stressful and devastating than stressors with an obvious cause. Perhaps discrimination is less controllable and therefore cause more aggression compared to out-group hassles, which may be perceived more controllable for the individual. In addition, Seglem et al. (2014) found that functional coping strategies were more challenging to apply in uncontrollable situations, and the unaccompanied refugees may choose disadvantageous coping strategies when coping with the daily hassles.

Few studies have isolated in-group hassles and studied the construct separately (Lay & Nguyen, 1998). The usefulness of studying acculturation-related hassles separately has proved to be valuable in this study. By disentangling the acculturation-related hassles, we showed that

perceived discrimination was the most consistent predictor of aggression. In this way, we can identify the contribution of the various hassles, which is useful when discussing preventive efforts in relation to aggression. The youth may have had different experiences from the migration process and from resettlement, which might explain variation in their perception of hassles (Keles, Friborg, et al., 2016a), making it interesting to investigate the hassles separately. We can thus contribute to the literature in a more specific way. However, the effect of each of the hassles on aggression was minor and the effect might have been stronger if we had not separated the hassles. Seglem and colleagues (2014) found that the level of daily hassles in a group of unaccompanied refugees negatively impact advantageous use of coping strategies, which can imply that an accumulation of hassles affects the how the youth cope with everyday life situations.

Perceived discrimination as the most consistent predictor of aggression. These findings add to the existing literature regarding the relation between discrimination and both types of aggression (Borders & Liang, 2011; Hartshorn et al., 2012; Lau et al., 2006; Smokowski & Bacallao, 2006). The findings demonstrate the negative effects of perceived discrimination, not only on the individual's health (Ellis et al., 2010; Finch et al., 2000; Mossakowski, 2003; Noh, Beiser, Kaspar, Hou, & Rummens, 1999; Ríos-Salas & Larson, 2015), but also on aggressive outcomes.

Discrimination is not only a matter for the individual; discrimination is a problem associated with the multicultural society. Formal conventions and legislation, such as the UN International Convention on the Elimination of all Forms of Racial Discrimination (OHCHR, 2017) and the Norwegian law against discrimination (Diskrimineringsloven, 2014) impose bans against discrimination. Discrimination is experienced by many groups of minority youth, both the participants in this study, immigrant youth in Norway (Oppedal, 2011) and other groups of adolescent minorities (Ellis et al., 2010; Hartshorn et al., 2012; Wong, Eccles, & Sameroff, 2003). These findings indicate that bans are not enough to prevent discrimination, and other initiatives are encouraged. Thurston and Vissandjée (2005) argued that not only the individual aspect must be identified, but also factors at the meso-, exo- and macro systems in ecological models, i.e. an identification of the surroundings such as school and work place, the major structure of society and institutional patterns of the culture, such as the political system, educational system etc. (cf. Bronfenbrenner, 1977).

Proactive affiliation-related aggression. Experiencing discrimination may give rise to perceptions of exclusions from the majority community, alienation and feelings of not being welcomed (Keles, Idsøe, et al., 2016). People have a fundamental need to belong (Baumeister & Leary, 1995), and feelings of rejection might threaten the fulfillment of this need. This may explain the relation between perceived discrimination and proactive affiliation-related aggression.

Reactive aggression. Perceived discrimination also predicted reactive aggression. This means that individuals who feel discriminated against, may respond impulsively and aggressively when facing frustration, or that experiences of discrimination lower the threshold for aggression. However, being aggressive may also in turn lead to a greater risk of discrimination, because reactive aggressive children and youth are more likely to be rejected by their peers (Crick & Dodge, 1996; Hartshorn et al., 2012). They may perceive the rejection as discrimination, rather than attribute it to their own behavior and are more likely to attribute a hostile bias in their interpretations of their peers' intentions, regardless of their peers' actual intentions. This might make their peers respond with increased hostility. The children's prior attribution is then confirmed, and they are caught in negative cycles of the self-fulfilling prophecy (Rosenthal, 1968). Hartshorn et al. (2012) suggested that aggression can be both an outcome variable and function as a predictor of perceived discrimination. Hence, the participants who reported reactive aggression in this study might also report more experiences of discrimination, although the cross-sectional design limits conclusions about causality.

Exposure to traumatic events. This study confirmed that unaccompanied refugees have experienced an accumulation of traumatic experiences (Bean, Derluyn, et al., 2007; Derluyn et al., 2009; Jensen et al., 2015; Oppedal & Idsøe, 2012; Wiese & Burhorst, 2007). However, exposure to traumatic events did not predict neither reactive aggression nor proactive affiliation-related aggression, unlike other research (Dodge et al., 1997; Hamner et al., 2015; Hecker et al., 2015; Marsee, 2008; Qouta, Punamäki, Miller, et al., 2008).

The normalization of violence model presented by Ng-Mak et al. (2002) offers a possible interpretation. Exposure to violence leads to emotional distress. This can either be dealt with using moral disengagement strategies, which increase the risk for aggressive behavior, or alternatively, manifest as depression. Perhaps in this group of unaccompanied refugees, the psychological distress manifests itself as depression, rather than through moral disengagement

strategies and aggression.

Another possible explanation might be that it is hard to distinguish between exposure to traumatic events and the symptoms of PTSD that some individuals develop after a trauma. Researchers have found that PTSD plays an important role in explaining the relation between exposure to trauma and reactive aggression (Hecker et al., 2015). This study did not investigate symptoms of PTSD, which may explain the lack of association.

The work done by Kanner et al. (1981) may also be relevant for understanding the lack of associations between exposure to trauma and aggression in this study. They concluded that daily hassles gave a more direct and broader estimate of psychological symptoms than major life events, and that daily hassles shared most of the variance in symptoms explained by major life events.

Previous studies have shown that traumatic exposure can reduce individual's' coping resources (Punamäki, Muhammed, & Abdulrahman, 2004; Street, Gibson, & Holohan, 2005). Thus, the accumulation of traumatic events that the unaccompanied refugees have been exposed to, even if not predicting aggression directly, may have affected their abilities to effectively cope with stressors the youths are exposed to after resettlement, such as daily hassles. Knowledge about the association of traumatic events, daily hassles, coping, and mental health reactions may contribute to better understanding of the psychological adjustment of unaccompanied refugees, and should be addressed in future studies.

The Mediating Effect of Moral Disengagement

Although there were significant and positive effects of the acculturation-related hassles on moral disengagement, disengagement played a minor role as a mediator between the acculturation-specific predictors and aggression. Only the relation between perceived discrimination and proactive affiliation-related aggression was partially mediated. This may suggest that moral disengagement shares some mechanisms with proactive affiliation-related aggression that is not present in reactive aggression. Proactive aggression and moral disengagement both involve social cognitive processing (Crick & Dodge, 1996; Fontaine et al., 2014). Reactive aggression, characterized as an impulsive and emotional reaction to threat or frustration (Berkowitz, 1990; Crick & Dodge, 1996; Vitaro & Brendgen, 2005), might involve fewer cognitive components. However, we cannot conclude that moral disengagement only

functions as a mediator between predictors and outcome variables sharing cognitive component, but this may explain why we did not find any significant relations when reactive aggression was the outcome.

The mediation role of moral disengagement between perceived discrimination and proactive affiliation-related aggression suggests that being discriminated against can lower the threshold to deactivate self-regulatory processes and disengage from moral standards, which in turn can make individuals more likely to engage in proactive affiliation-related aggression.

This supports the notion of Fontaine et al. (2014). They implied that being rejected by peers can make the individual experience the world as unjust, and that antisocial strategies are necessary to achieve one's goal. This can make the individual prone to turn off his or her "moral compass". Perren et al. (2012) distinguished between aggressive and nonaggressive victims of bullying, and found two developmental trajectories. The children's proneness to moral disengagement were dependent on their level of aggression. Children who were victimized, but also showed aggressive tendencies were less empathic and more likely to accept violations of moral standards. Nonaggressive children who were chronically victimized by bullying were more morally desensitized, and although they can perceive the world as an unfair place, they empathized more with a hypothetical victim. Based on this, we can assume that the participants who reported being discriminated against in this study, also can be further distinguished into aggressive and nonaggressive victims. These different trajectories might partly explain the significant, albeit low, associations between perceived discrimination, moral disengagement and proactive affiliation-related aggression.

Levels of moral disengagement. Although the mediating effects of moral disengagement were low, the research findings give valuable information indicating that unaccompanied refugees do not deviate considerably in how prone they are to disengage from moral standards compared to other groups. Comparable studies found a somewhat higher group mean level in a younger group of Italian children (Bandura et al., 1996), while others found lower mean levels of moral disengagement in a sample of low-income boys (Hyde et al., 2010). According to the theory, the participants' levels of moral disengagement should be reflected in their aggression scores (Bandura, 1991a), which in this study was low. Despite the hypothesized risk factors before, during and after their migration, this group does not seem to use disengagement strategies extensively when engaging in aggressive behavior.

It is worth noting that Bandura originally developed this scale for children between 10 and 15 years (Bandura et al., 1996). However, many studies have found that this construct is sensitive for age variations (Caprara et al., 2014; Paciello, Fida, Tramontano, Lupinetti, & Caprara, 2008). The participants in this study were on average older, meaning that their cognitive development and hence moral understanding, is expected to be more developed than for younger children. Moral disengagement is under-studied in diverse cultural groups and among refugee youth, thus this study is an important first step in this direction, and in shedding additional light on potential mechanisms underlying aggressive behavior.

Limitations

The present study was based on cross-sectional data; thus, it is not possible to draw conclusions about causal relationships. However, we applied Hayes & Little's (2013) mediation model to investigate relations between variables, which they consider a causal model.

Moreover, the scale of proactive affiliation-related aggression displayed a low Cronbach's alpha. Low reliability can be problematic, because the scale might not reflect optimally the construct that it is supposed to measure (Field, 2013), and the scale's trustworthiness might be at stake (Nunnally, 1975). However, the scale consists of only four items, which can explain the low reliability, but still cause concerns (Cortina, 1993). We accepted the low Cronbach's alpha, and included the scale for theoretical reasons. Previous work done by Roland and Idsøe (2001) has demonstrated discriminant validity in this aggression scale, meaning that the three types of aggression do not correlate, as theoretically assumed. In addition, this is the first study to apply a shortened version of the moral disengagement scale. The factor analysis did not indicate that the different disengagement strategies clustered in the intended factors, which cause concerns for the worthiness of the scale (see Appendix C).

Furthermore, the self-report design may increase social desirability bias, and can affect sensitive topics such as moral reasoning and aggression. This might reflect missing data related to this (see Appendix E). Additionally, questions related to these themes can be difficult to understand when posed in a language different from the participants' mother tongue.

While the overall sample size was acceptable, the participants represented many countries of origin, which could provide homogenous subgroups. Grouping the participants after country of origin and cultural background is, arguably, important when studying culturally sensitive

topics such as moral reasoning and aggression. However, we had to consider a trade-off; either small samples and homogenous groups related to country of origin, which would have prevented several of the analyses we included, or a larger heterogeneous sample size. The analyses of background variables (appendix F) indicated that the level of proactive affiliation-related aggression varied significantly across nationalities. However, this does not necessarily imply that the association between variables are affected by cultural variation, but should be investigated in future studies. This study aimed to add to the existing literature targeting unaccompanied minors, and followed up the design of the YCC-project and several other studies that targeted the overall refugee group (Jensen et al., 2015; Keles, Friborg, et al., 2016a; Oppedal & Idsøe, 2012; Oppedal & Idsøe, 2015; Seglem et al., 2014; Sourander, 1998).

In addition, the proportion of females was small, and hence, the results from the participating males may outplay potential gender variation in the findings. However, the distribution of gender among the participants in this study reflects the gender differences among unaccompanied refugee minors arriving in Norway, and implies effort to oversample girls in future studies (Wiggen, 2014).

Implications

Theoretical implications. An investigation of aggression in terms of proactive affiliation-related aggression and reactive aggression give additional information about the cause and function of the aggressive behavior among unaccompanied refugees. This study contributes to the existing literature by showing that perceived discrimination has unique and significant effect on both reactive and proactive aggression, even when controlling for several other acculturation-specific and daily general hassles. Mapping out different antecedents and correlates associated with aggressive behavior, improves our knowledge, and theorizing about later adjustment problem among young unaccompanied refugees.

Although previous research findings have demonstrated the important role of moral disengagement in aggressive behavior, this study found small indirect effects of moral disengagement. Even if disengaging from moral standards was not a consistent mediator, our findings add to the research literature by showing that moral disengagement is more strongly correlated with proactive affiliation-related aggression compared to reactive aggression. Future replication studies in other refugees and immigrant groups, and with longitudinal data may

contribute to knowledge about the generalizability of our findings.

Practical and clinical implications. An important finding from this study is that unaccompanied refugees are not particularly aggressive, although they have been exposed to an accumulation of many risk factors. As suggested by Oppedal and Idsoe (2012), the unusual context that characterizes unaccompanied refugees may promote emotion regulation processes regarding anger and aggression. From a clinical perspective, we must be aware of a possible over-regulation of emotions. It is important to notice that the two types of aggression might require different interventions. Higher levels of reactive aggression may suggest that interventions should focus on emotional regulation, and clinicians are encouraged to help the youth to find ways to cope with and regulate psychological stress. Interventions targeting proactive affiliation-related aggression, however, may focus on social interaction, such as dysfunctional peer relations and peer strategies. It is important to note that the unaccompanied refugees participated in 2011, and was already granted residency in Norway. This may make their situation different from unaccompanied minors arriving today, because the asylum policy is different and might influence their situation.

The pre- and post-migration framework applied for this study revealed that it was the post-migration hassles, rather than the pre-migration trauma, that promoted aggressive behavior in this group. An implication to draw from this is to encourage clinicians, case workers and other professionals in charge of the psychosocial adaptation to be aware of the impact of stressors in the everyday life of the youth. Daily hassles, such as perceived discrimination, are more immediate stressors than the traumatic events, which can be more distal. This is in line with the guidelines of Miller and Rasmussen (2009), which is not meant to encourage ignoring the traumatic events, but address the prominent daily stressors, before providing clinical intervention towards the psychological trauma (Miller & Rasmussen, 2010).

As perceived discrimination singled out to be the most important contributor to aggression, we encourage systematic work by professionals working with the unaccompanied refugees. They are encouraged to address discrimination among youth and explore the prevalence, the content of discrimination and the meaning that the individual has attributed to the experience. It is possible to target perceived discrimination as a phenomenon by learning about how humans are biased to understand the world in terms of categories, how everyone wants to protect their own in-group belonging and how we search for stereotypic information (see Fiske,

2000 for an overview). This might contribute to add meaning for the youth, so that they can understand the mechanisms of discrimination and other challenges when adapting to a new society.

First and foremost, discrimination is a sociocultural phenomenon that occurs in various forms and on multiple levels, from discrimination of the individual and discrimination of groups (Ríos-Salas & Larson, 2015), to institutional and structural discrimination (Pincus, 1996). Interventions must therefore target these levels. Much of the preventive work must be done in the local community where the youth live. By providing social support, including organized activities and teaching of social codes for the youth, their cultural competence will increase, which is important in order to cope with discrimination (Oppedal & Idsøe, 2015). Previous studies have also found that social support or a strong bond with teachers serve as protective factors (Cristini et al., 2011; Simons et al., 2006). The schooling system might therefore be an effective area for preventive effort. The curriculum and formal guidelines for the Norwegian schools and kindergartens are already stating the importance of counteracting discrimination (Barne- og likestillingsdepartementet, 2009), but in addition to this, we suggest campaigns and plans for preventions, similar to campaigns directed towards bullying.

Future Studies

For future studies, it would be of interest to acquire a deeper understanding of the relation between depression and aggression in this group. We have discussed a possible relation between aggression and depression, knowing that unaccompanied minors report high levels of depression (Bean, Derluyn, et al., 2007; Derluyn & Broekaert, 2007; Oppedal & Idsoe, 2012; Seglem et al., 2011). A clarification of the association between these constructs, and possibly identify suppressive effects or underlying mechanisms could provide deeper understanding of aggression in this group.

Both culture and age may influence aggression and moral reasoning. This study included different nationalities and age groups. For future studies, it would be of interest to narrow the age range, as well as address the different nationalities separately to acquire a deeper knowledge about the role of age and the different cultures in relation to these topics.

It would also be beneficial to broaden or complement the trauma scale. That is, to also include questions about how many times the participants have been exposed to each of the

traumatic events, perceived severity and PTSD-symptoms. We argue that this will give a better estimate of the potential effect that pre-migration experiences have on moral disengagement and aggression.

Lastly, the association between acculturation-related hassles and daily general hassles should be further investigated in relation to aggression. The present research included daily general hassles as a control variable to extract the unique effect of acculturation-related hassles. We can speculate if there is an accumulative effect of all the stressors that these youth experience. Accumulation and persistence of stressors of everyday life can affect the individual's psychological well-being. Many stressors can be overwhelming for the individual's coping system and affect mental health, even if one can cope with each individual hassle (Miller & Rasmussen, 2010). Therefore, future studies are encouraged to address the accumulative effect that daily hassles, both acculturation-related and the general hassles, has on aggression.

Conclusion

This study is the first to investigate aggression among a group of resettled unaccompanied refugees in Norway. Results reveal that this group is not particularly aggressive. The genders did not differ in reactive aggression, although males reported significantly more proactive affiliation-related aggression. The results showed the usefulness of a pre- and post-migration framework, in which hassles after resettlement seem to affect aggression more than the traumatic events before resettling in Norway. Perceived discrimination singles out as the most consistent contributor to both reactive aggression and proactive affiliation-related aggression. Although moral disengagement was hypothesized to facilitate aggressive behavior, moral disengagement partly accounts for the relation between perceived discrimination and proactive affiliation-related aggression only. Systematic work aiming at preventing discrimination in the population is therefore encouraged on all levels to counter the negative outcomes and secure better integration of young unaccompanied refugees into the Norwegian society.

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Appendix A
Country of Origin

Table AI

Countries of origin

Country	Frequency
Afghanistan	286
Somalia	62
Iraq	41
Sri Lanka	41
Eritrea	32
Ethiopia	28
Congo	17
Myanmar	16
Burundi	11
Angola	7
Liberia	7
Rwanda	3
Iran	3
Sudan	2
Uganda	2
Tanzania	2
Mongolia	2
Gambia	1
Sierra Leone	1
Azerbaijan	1
Kazakhstan	1
Yemen	1
Kina	1
Unknown*	9
Total	577

Note. *UDI did not have official information about country of origin for nine of the participants.

Appendix B

Principal Axis Factor Analysis of the Aggression Scale

To investigate the structure in the aggression scale, we conducted a principal axis factor analysis on the nine items measuring reactive aggression and proactive affiliation-related aggression. One item measuring proactive affiliation-related aggression was already deleted to increase reliability from Cronbach's alpha .53 to .58. We applied oblique rotation (direct oblimin). This rotation allows factors to correlate, and was preferred because previous literature has suggested that features in reactive and proactive aggression may correlate (Dodge et al., 1997).

Sample adequacy was verified, as indicated by the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) = .79. All KMO values for individual items were greater than .69, which is acceptable (Field, 2013).

The factor analysis showed that two factors had eigenvalues above Kaiser's criterion of 1, and in combination explained 46.27% of the variance. The scree plot confirmed extracting of two factors. Table B1 displays the factor loadings after rotation. Summarized, the factor analysis confirmed the original structure, and the items loaded in the factor it was intended.

Table B1

Factor loadings for exploratory factor analysis with direct oblimin rotation of aggression scale.

Item	Reactive Aggression	ProAffAgg*
Get easily angry ^a	.63	.32
Get so angry, don't know what I do ^a	.61	.36
Get angry if I don't get my way ^a	.53	.18
Angry if I loose ^a	.53	.26
Angry if criticized by adults ^a	.50	.19
Protest strongly when fun plans change ^a	.44	.31
Become friends when we break the law ^b	.28	.65
Become friends when teasing others ^b	.25	.59
Do wrong to be with others ^b	.29	.48

Note. One item in the ProAffAgg-scale "I feel that we become friends when we freeze out others" is removed. Factor loading > .40 are in boldface. Letters indications: ^a=items in reactive aggression scale, ^b=items in proactive affiliation-related aggression scale. The two factors in combination explained 46.27% of the variance.

Appendix C

Principal Axis Factor Analysis of the Moral Disengagement Scale

A principal axis factor analysis was applied on the 12 items of the MD-scale with orthogonal (varimax) rotation. Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) = .79, which is acceptable for sampling adequacy (Field, 2013). Four factors had eigenvalues over Kaiser's criterion of 1, and in combination explained 56.96% of the variance. The scree plot, although ambiguous, allowed that the point of inflexion was after the fourth factor. This is in line with the Kaiser's criterion of eigenvalues over 1, and four factors were extracted.

Table C1

Factor loadings for exploratory factor analysis with varimax rotation of MD-scale

Item	1	2	3	4
It is alright to fight to protect your friends ^a	.73	-.08	.08	.36
It is alright to beat someone who bad mouths your family ^a	.71	.31	.09	-.01
It is alright to fight when your group's honor is threatened ^a	.78	.06	.13	.08
It is alright to lie to keep your friends out of trouble ^a	.14	-.09	.28	.66
Slapping and shoving someone is just a way of joking ^b	.08	.23	.36	.42
Kids cannot be blamed for using bad words when all their friends do it ^c	.15	-.10	.71	.13
Cant blame bad behavior caused by the influence of friends ^c	.24	.37	.63	-.13
It is okay to tell small lies because they don't really do any harm ^d	.13	.30	-.07	.77
Teasing someone does not really hurt them ^d	.27	.51	.10	.26
Insults among children do not hurt anyone ^d	.03	.74	.17	.19
Children are not at fault for misbehaving if their parents are to strict ^e	-.03	.13	.71	.19
Kids who get mistreated usually do things that deserve it ^e	.04	.79	.08	-.05

Note. Factor loading > .40 are in boldface. Letters indicate which subscale the items are intended to belong to. ^a=moral justification, ^b=Euphemistic language, ^c= Displacement of responsibility, ^d=Distorting consequences, ^e=Attribution of blame. The four factors in combination explained 56.96% of the variance.

Table C1 shows results from the factor analysis, which did not confirm the structure present in the original scale. In addition, Cronbach's alpha for the subscales ranged from .23 to .64, which was problematic. However, the scree plot revealed that one factor was predominant. Factor one had an eigenvalue of 3.34, while the rest of the eigenvalues ranged from 1.02 to 1.36. Factor one explained 27.83% of the total variance. Therefore, we ran an additional factor analysis where we requested one factor to be extracted. Table C2 shows that all items have a loading above .30, which is considered acceptable for sample sizes over 300 (Stevens, 2012). For this study, all 12 items intended to reflect one construct, moral disengagement. Cronbach's alpha for this adapted version was .76, which is an acceptable value for internal consistency.

Table C2

Summary of exploratory factor analysis with one factor

Item	Factor loading
It is alright to fight to protect your friends ^a	.49
It is alright to beat someone who bad mouths your family ^a	.52
It is alright to fight when your group's honor is threatened. ^a	.48
It is alright to lie to keep your friends out of trouble ^a	.39
Slapping and shoving someone is just a way of joking ^b	.46
Kids cannot be blamed for using bad words when all their friends do it. ^c	.42
Can't blame bad behavior caused by the influence of friends ^c	.51
It is okay to tell small lies because they don't really do any harm ^d	.46
Teasing someone does not really hurt them ^d	.50
Insults among children do not hurt anyone ^d	.50
Children are not at fault for misbehaving if their parents are to strict ^e	.42
Kids who get mistreated usually do things that deserve it ^e	.37

Note. Factor one explained 27.83% of the total variance. Factor loading > .30 are in boldface. Letters indicate which subscale the items are intended to belong to. ^a=Moral justification, ^b= Euphemistic language, ^c= Displacement of responsibility, ^d= Distorting consequences, ^e= Attribution of blame.

Appendix D

Principal Axis Factor Analysis of the Daily General Hassles Scale

A principal axis factor analysis with orthogonal rotation (varimax) was conducted on the 15 items in the daily general hassles scale. The Kaiser - Meyer - Olkin measure verified the sampling adequacy, $KMO = .70$. All the items had a value greater than $.52$, which is just above the acceptable limit of $.5$ (Field, 2013). The analysis of eigenvalues for each factor in the data revealed that five factors had an eigenvalue of more than 1 (Kaiser's criterion). In combination, they explained 60% of the variance. The scree plot is slightly ambiguous for the last two factors, but shows inflexions that would support retaining four factors. We retained four factors because the eigenvalue of factor 5 was marginally above Kaiser's criterion (1.15). The explained variance of four factors was then 52.35%. Table D1 shows the factor loadings after rotation. The items clustered in the same factors they were intended to, with one notable exception within the *Worries about social network members* - subscale. Running a reliability analysis revealed that this item would increase reliability if deleted. Accordingly, this item was deleted for the final scale. Running the factor analysis again, all items clustered around the intended factors, and the explained variance of the four factors was 55%. Cronbach's alpha for the overall scale was $.74$, and for the subscales, the values ranged from $.53$ to $.74$.

Table D1

Factor loadings for exploratory factor analysis with varimax rotation of daily general hassles-scale

Items	1	2	3	4
Problems because you do not have money to buy the things you need? ^a	.04	.06	.89	.11
Worried because you do not have enough money? ^a	.14	.10	.87	-.06
Huge pressure from your surroundings to succeed in school/work ^b	.11	.02	.08	.74
Heavy workload at school/work ^b	.11	.15	-.50	.77
I have become enemies with someone I used to spend time with ^c	.09	.57	.02	-.02
Arguments or conflicts with an adult I am living with ^c	.02	.58	.06	.10
Arguments or conflicts in relation to friends ^c	.07	.70	.07	.23
Problems in relation to teachers or boss at work ^c	.02	.48	.07	.32
Worried about things that are happening in your home land ^d	.67	-.20	.04	.01
Worried about your family members in your home land ^d	.65	-.14	.15	-.05
Concerns because someone in my family is upset or has given up ^d	.51	.42	-.02	.07
Concerns because someone in my family is anxious or scared ^d	.76	.29	.00	.00
Concerns because one of my siblings or parents are in serious trouble ^d	.75	.14	.04	.18
Concerns because one of my friends is in serious trouble ^d	.52	.20	.05	.23

Note. *This item was excluded in the final scale due to overall reliability. Factor loadings > .40 are boldface. Letters indicate ^a= items related to economic hardship, ^b= achievement-related hassles, ^c= conflict-related hassles, ^d= worries about social network members. In combination, the four factors in explained 55% of the variance.

Appendix E

Missing Data Pattern

An acceptable level of missing data is often considered less than five per cent (Schafer, 1999), although Bennett (2001) suggested a level of less than ten percent acceptable. Some of the scales applied in this paper exceeded this limit. Therefore, we looked for patterns in missing data, and investigated some of the emerging hypotheses.

Language difficulties. Norwegian was not the mother tongue of the participants, and language difficulties in the questionnaire were hypothesized to lead to a greater amount of missing data. A review of the items with a large amount of missing data revealed that this might be related to phrasing and the language of the questions. Long sentences and inclusions of abstract words were often associated with missing data. An example is “it is not okay to reprimand children who are swearing when all their friends do so”, which obtained a 27 % missing rate.

We suspected that the participants' age and their length of stay in Norway could influence language proficiency, which could possibly explain missing data on items with long and abstract phrasings. To investigate this, the participants who had answered at least half of the items in one scale received a mean sum score (i.e. we summed up the participants' scores in the scale, and divided it by the number of answered items. This made each participant receive an average score based on their answers). The participants who received a score on all eight scales applied in this study were compared with the participants who missed one or more scores. Dummy variables were conducted (1 = scores on all the scales, 0 = one or more missing). Independent t-tests were applied to investigate if significant differences between group means emerged. We found a significant difference related to years of living in Norway, $t(563) = -2.19, p = .03$. Participants who obtained scores on all the scales had stayed a little longer ($M = 4.74, SD = 2.46$) than those who did not receive a score on all scales ($M = 4.21, SD = 2.16$). The effect size was, however, small, $d = .02$. No significant differences were found related to the age of the participants.

The placement of the scale in the questionnaire. The participants spent 1-2 hours filling out the questionnaire. We hypothesized that more missing data occurred near the end of the questionnaire due to tiredness and/or boredom. The moral disengagement scale, which had the most missing data, was placed closer to the end of the questionnaire (p.16/24). The scales

measuring acculturation-related hassles, on the other hand, were placed in the beginning of the questionnaire and had fewer missing data (p. 7/24). The trauma scale, however, was placed almost at the end (p.20/24), yet did not have that many missing answers. This does not support the notion that placement in the questionnaire mattered with respect to obtaining missing data. However, items in the trauma scale were yes/no questions, and might have been less demanding to answer even though they came later in the questionnaire. Thus, no clear pattern emerged to support this hypothesis, yet, we cannot exclude the hypothesis. See table E1.

Sensitive content. Some of the questions may have been perceived as sensitive and personal. Some questions might have been difficult or too alarming to answer. This consideration was partially supported when scrutinizing the separate items regarding missing items. Questions related to moral reasoning and aggressive behavior were often found to have high missing rates. For example, “it is not okay to reprimand children who are swearing when all their friends do so” (27% missing), “children are not at fault for misbehaving if their parents are too strict (25% missing) and “protest strongly when fun plans change” (15% missing). This might also be related to uncertainty about moral codes and social behavior in Norway.

Country of origin. We also investigated whether country of origin would influence the amount of missing data. A cross tab analysis revealed that the participants from Somalia had fewer full scores (71% of the participants received a mean sum score on all eight scales, i.e. answered more than half of the items in all scales), while the category “others” had answered the most (81.6 % received a mean sum score on all eight scales).

Gender. It was also of interest to investigate if the two genders would differ in the amount of missing data. An independent t-test revealed that the genders did not differ significantly. This means that there were no significant differences in the percentage of males receiving a mean sum score on all eight scales compared to the females.

Table E1

Scales and percentage missing according to page number in the questionnaire.

Page number	Scale	Per cent
Official Data	Length of years stayed in Norway	2.1%
Official Data	Age	4%
7	Out-group hassles	2.3%
7	In-group hassles	4.2%
8	Discrimination	6.1%
10-11	ReAgg	5.2%
10-11	ProAffAgg	7.5%
12	General hassles	8.8%
16-17	MD-scale	15.4%
20	Trauma	6.8%

Appendix F

Investigation of Background Variables

To investigate if the sample could be merged as one homogenous group, we examined the background variables age, country of origin and length of stay against the two main outcome variables (reactive aggression and proactive affiliation-related aggression).

Age. The participants were first divided into four groups based on their age. One group for those under the age of 18 ($n = 94$), which represented youth who are under the legal age in Norway. The second group was for the young adults between 18-21 years ($n = 326$). The third group for those over 21 and up to 25 years ($n = 100$), and the fourth group for the oldest participants, age 25 and above ($n = 57$). We had no information about age for 23 of the participants. Two separate ANOVA analyses were then conducted on reactive aggression and proactive affiliation-related aggression.

The overall results of the ANOVAs indicated no significant group differences due to age on reactive and proactive affiliation-related aggression, respectively. Table F1 displays Hochberg GT2 post-hoc tests. This post-hoc test was applied because it is recommended when the sample sizes of the subgroups are unequal (Field, 2013).

Country of origin. Before conducting the ANOVAs, the participants were grouped after nationality; Somalia ($n = 62$), Afghanistan ($n = 286$), Iraq ($n = 41$), Sri Lanka ($n = 41$), and “Others” ($n = 147$).

A one-way ANOVA resulted in significant mean group differences of countries of origin on proactive affiliation-related aggression, $F(4, 575) = 4.14, p < .01$. The participants from Somalia reported significantly less proactive affiliation-related aggression ($M = 1.51, SD = .59$) compared to the Afghani participants ($M = 1.90, SD = .76$), $p = .01$. See table F1. No significant differences were found for reactive aggression.

Length of stay. Lastly, we examined the impact of the participants' length of stay in Norway, i.e. years of resettlement after asylum application had been approved. The participants were divided into three groups, depending on how long they had stayed in Norway after their application was approved. We grouped those who had stayed in Norway for less than three years together ($n = 145$), those who had stayed between three and five years ($n = 268$), and those who had been resettled for more than five years ($n = 164$).

The ANOVA revealed significant group differences in length of stay on proactive

affiliation-related aggression $F(2, 574) = 4.20, p = .02$. Table F1 summarizes the post-hoc tests, which indicate that the participants who had stayed in Norway between three and five years reported significantly more proactive affiliation-related aggression ($M = 1.87, SD = .78$) compared to those who had stayed longer than five years ($M = 1.65, SD = .71$), $p = .01$. The ANOVA also resulted in significant group differences in length of stay on reactive aggression, $F(2, 576) = 4.30, p = .02$. Those who had stayed in Norway between three and five years reported significantly more reactive aggression ($M = 2.54, SD = .71$) compared to those who had stayed longer than five years ($M = 2.37, SD = .65$), $p = .02$. See table F1.

Table F1

Six separate ANOVA and Hochberg GT2 post hoc tests investigating group differences of control variables on ProAffAgg and ReAgg.

Variables	<i>n</i>	ProAffAgg		ReAgg	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age					
< 18	94	1.76	.77	2.43	.68
18-21	326	1.84	.76	2.51	.69
21-24	100	1.79	.77	2.44	.70
>24	57	1.55	.62	2.28	.57
Country of Origin ^a					
Somalia	62	1.51**	.59	2.35	.63
Afghanistan	286	1.90**	.76	2.49	.69
Sri Lanka	41	1.71	.75	2.36	.66
Iraq	41	1.80	.72	2.70	.72
Others	147	1.70	.79	2.40	.66
Length of Stay ^b					
< 3 years	145	1.78	.74	2.40	.64
3-5 years	268	1.87**	.78	2.54*	.71
> 5 years	164	1.65**	.71	2.37*	.65

Note. ^a= There was a significant effect of country of origin on ProAggAgg, $F(4, 575) = 4.14, p < .01$, and post hoc analysis showed a significant difference between Somalian and Afghani youth, $p < .01$

^b= There was a significant effect of length of stay on ProAggAgg $F(2, 574) = 4.20, p = .02$, and post hoc analysis showed a significant difference between those who had stayed the longest compared to those who has stayed 3-5 years. , $p < .01$. There was also a significant effect of length and stay on ReAgg, $F(2, 576) = 4.30, p = .02$, and post hoc analysis showed a significant difference between those who had stayed the longest compared to those who has stayed 3-5 years, $p < .05$.

Appendix G

Total Effects of the Predictors on Proactive Affiliation-Related and Reactive Aggression

Table G1

Two separate mediating analyses displaying total effects of discrimination and control variables, including the remaining predictors on ProAffAgg and ReAgg

Variable	ProAffAgg			ReAgg		
	β	SE	R^2	β	SE	R^2
Discrimination	.16**	.04	.09**	.20**	.04	.20**
In-group hassles	.12*	.05	.07**	.00	.05	.17**
Outgroup hassles	.05	.05	.05**	.06	.05	.16**
Trauma-exposure	-.04	.04	.04**	.00	.04	.16**
General hassles	.15**	.05	.04**	.30**	.05	.16**
Length of Stay	-.12	.07	.02**	.01	.07	.01*
Age	.01	.07	.01*	-.08	.07	.01*

Note. Perceived discrimination was entered as the independent variable, while the rest of the predictors were entered as covariates (control variables) in *Process*.

All the variables explained 9% in ProAffAgg, $R^2 = .09$, $F(7,569) = 7.36$, $p < .001$

All the variables explained 20% in ReAgg. $R^2 = .20$, $F(7,569) = 18.05$, $p < .001$

* $p < .05$, ** $p < .01$.

Table G2
*Total effect of in-group hassles and control variables
of ProAffAgg*

Variable	ProAffAgg		
	β	SE	R^2
In-group hassles	.12*	.05	.09**
Discrimination	.16**	.05	.08**
Outgroup hassles	.05	.05	.05**
Trauma-exposure	-.04	.04	.04**
General hassles	.05	.05	.04**
Length of Stay	-.12	.07	.02**
Age	.01	.07	.01*

Note. In-group hassles is the independent variable, the rest of the variables are covariates (control variables).

$R^2 = .09$, $F(7,569) = 7.36$,

* $p < .05$, ** $p < .01$.

Appendix H

The Division of Labor

We have collaborated closely, and each of one of us is responsible for all the work done in this report. As a starting point for the theoretical part, Anne Kristine did the literature review on unaccompanied minor asylum seekers and acculturation, while Linn reviewed literature on aggression and moral disengagement. Both considered the trauma literature. However, given the research questions and the model proposed for this study, these fields of literature needed to be integrated. Table H1 gives an overview of whom had the main responsibility for the different parts of the written text. All parts have been discussed, reviewed and revised by both authors.

Table H1

An overview of whom had the main responsibility for each of the following part of the text

Part	Author
Abstract	Anne Kristine
Preface	Both
Introduction: First paragraph	Both
Introduction: Unaccompanied minors in Norway	Anne Kristine
Introduction: Acculturation development context	Anne Kristine
Introduction: Reactive and proactive aggression	Linn
Introduction: Predictors of aggression	Both
Introduction: Moral disengagement	Linn
Introduction: Moral disengagement as a mediator	Both
Introduction: The present study	Both
Method: Sample	Anne Kristine
Method: Second wave participants	Anne Kristine
Method: Measures	Both
Method: Statistical Approach	Linn

Method: Analyses	Linn
Results: Preliminary Analyses	Both
Results: Descriptive statistics and correlations between variables	Both
Results: Gender differences	Both
Results: Predictors of aggression	Both
Results: Mediation	Both
Discussion: Aggression among unaccompanied refugees	Linn
Discussion: Predictors of aggression: Acculturation-related hassles	Anne Kristine
Discussion: Predictors of aggression: Experiences of traumatic events	Linn
Discussion: The mediation effect of moral disengagement	Both
Discussion: Limitations	Anne Kristine
Discussion: Implications	Anne Kristine
Discussion: Future Studies	Linn
Appendix A	Anne Kristine
Appendix B	Linn
Appendix C	Linn
Appendix D	Anne Kristine
Appendix E	Both
Appendix F	Both
Appendix G	Linn
Tables and figures	Linn
References	Anne Kristine
