

Reactive and Proactive Aggression among Immigrant and Non-Immigrant Early Adolescents
in Norway: The Relations to Emotional and Conduct Problems

Hildegunn Fandrem¹, Brit Oppedal² and Thormod Idsoe^{1,3}

¹Norwegian Center for Learning Environment and Behavioural Research in Education,
University of Stavanger, Norway

² Norwegian Institute of Public Health, Norway.

³ The Norwegian Center for Child Behavioral Development, Norway.

Author Note

Corresponding author: Hildegunn Fandrem, University of Stavanger, 4026 Stavanger,

Norway. E-mail: Hildegunn.fandrem@uis.no ORCID: 0000-0003-3204-6575

Abstract

Objective: This study explores the differences in the association between three different types of aggression (reactive aggression, power-related proactive aggression and affiliation-related proactive aggression) and emotional and conduct problems between early adolescents with immigrant and non-immigrant backgrounds in Norway. **Methods:** The sample comprised 1759 early adolescents in fifth to eighth grade (10- to 15-year-olds). The proportion of early adolescent immigrants with two foreign-born parents was 862, and 897 participants were adolescents with two Norwegian-born parents. The gender distribution was similar in the immigrant and non-immigrant samples, 48.2% boys and 49.5% girls. The mean age was 11.6 years (SD 1.25) for immigrant boys, 11.7 (SD 1.29) for non-immigrant boys, 11.6 (SD = 1.25) for immigrant girls, and 11.8 (SD = 1.27) for non-immigrant girls. Data were collected via self-report assessments. **Results:** A multigroup structural equation model revealed that the effects of reactive and proactive aggression were different for conduct and emotional problems. Only reactive and power-related proactive aggression was significantly associated with conduct problems, and effect sizes were independent of immigrant status. The effects of reactive and power-related proactive aggression on emotional problems were stronger for non-immigrant early adolescents, while the effects of affiliation-related proactive aggression were stronger for immigrant-background early adolescents. **Conclusion:** A better understanding of the underlying mechanisms of the associations between aggression and emotional problems and the variation between immigrant and non-immigrant early adolescents can shed light on the etiology of mental health and behavioral problems. The importance of such knowledge in designing interventions targeting aggression among early adolescents in multicultural contexts is discussed.

Keywords: reactive aggression, proactive aggression, immigrant, early adolescents, emotional problems, conduct problems

Reactive and Proactive Aggression among Immigrant and Non-Immigrant Early Adolescents in Norway: The Relation to Emotional and Conduct Problems

Over the last decade, the number of people with an immigrant background has increased considerably. In Norway, 17% of the Norwegian population has an immigrant background (Statistics Norway, 2019) compared to 9.1% ten years ago. A similar increase has been noted in other countries; for example, in Austria, the number of people living in the country but born elsewhere increased by 35% over the last decade (Demographics of Austria, 2019). This increase is accompanied by a growth in studies that focus on immigrants' psychosocial adaptation (Berry, Phinney, Sam & Vedder, 2006, Fandrem, Sam & Roland, 2009; Oppedal, 2017a & Røysamb, 2004). Variations in adolescent immigrants' psychological adaptation, such as mental health and depression, are found both within and between immigrant youth groups (Oppedal, 2017b; Oppedal, Røysamb & Heyerdahl, 2005) as well as between immigrant and non-immigrant youth, with immigrants scoring higher than non-immigrants (Fandrem, et al., 2009; Oppedal & Røysamb, 2004). Only a few studies involve early adolescents (Sam & Berry, 2004), and as far as we know, no studies have focused on emotional and conduct problems, which are the two major symptom groups during childhood and adolescence. In one study, early adolescent girls and boys of an immigrant background reported higher levels of emotional problems than non-immigrants, while the level of conduct problems was the same in the two groups (Oppedal, 2017a). More knowledge about different predictors of emotional and conduct problems, such as different kinds of aggressions, in these age groups may shed light on the difference between immigrants and non-immigrants.

Moreover, previous research has demonstrated consistent relationships between both reactive and proactive aggression and various mental health and problem behavior outcomes in children and adolescents. Associations from both reactive and proactive aggression to bullying behavior were found among 10-year-olds, while only proactive aggression was associated with bullying among 14-year-olds (Roland & Idsøe, 2001). Tremblay (2010) argued that disruptive behavior is universal during early childhood but that with age, children learn socially acceptable behaviors through interactions with their environment. Because cognitive skills impact the way that children and adolescents express their aggression, we need to better understand how the associations between aggression and mental health problems, including behavior problems, develop over time. Previous studies with adolescents have found affiliation-related proactive aggression to be more strongly associated with bullying in the immigrant group than in the native group, whereas for natives, power-related proactive aggression is more strongly related to bullying (Fandrem, Strohmeier & Roland, 2009; Strohmeier, Fandrem, Stefanek & Spiel, 2012; Solomontos-Kountouri, Strohmeier & Demetriou, 2016). The present study expands on previous research by targeting early adolescents (age 10-15 years) and focusing on conduct and emotional problems. The overall aim was to explore whether there are immigrant status differences in the effects of various forms of aggression on emotional and conduct problems. This expansion is relevant because reactive aggression diminishes over time, while proactive forms of aggression increase (Tremblay, 2010). Furthermore, the study may provide insights into the generalizability of these associations across groups that differ in cultural background and immigration experiences.

Reactive and Proactive Aggression

Over the last three decades, several authors have distinguished reactive aggression from proactive aggression, demonstrating different etiologies and social, cognitive and mental health outcomes (Bandura, 1986; Dodge & Coie, 1987; Vitaro, Brendgen, & Tremblay, 2002). Reactive aggression involves angry outbursts in response to threats or provocations. Proactive aggression is goal-oriented and does not require provocation or anger. The types of emotions involved determine the types of aggression; pleasure or stimulation is the dominant emotion in proactive aggression, while anger is salient in reactive aggression (Roland & Idsøe, 2001). Research has shown that proactive aggression predicts delinquency and disruptive behavior (Fite, Colder, Lochman, & Wells, 2008; Fite, Raine, Stouthamer-Loeber, Loeber, & Pardini, 2010; Vitaro, Gendreau, Tremblay, & Oligny, 1998). In contrast, reactive aggression is associated with emotional problems such as depression and anxiety (Card & Little, 2006; Dodge, Lochman, Harnish, Bates, & Pettit, 1997; Fite, Stoppelbein, & Greeining, 2009;). None of these studies examined the generalizability of the relations between pro- and reactive aggression, on the one hand, and emotional and conduct problems, on the other, in samples of immigrant and non-immigrant children and adolescents. Thus, the present study is the first to examine these behaviors with respect to immigrant status.

Most studies of predictors of psychological problems among children and adolescents of immigrants have focused on adolescents and involved acculturation-related variables (Keles, Friborg, Idsoe, Sirin, & Oppedal, 2015; Schmitt, Postmes, Branscombe, & Garcia, 2014; Sirin, Ryce, Gupta & Rogers-Sirin, 2013). These studies have shown that youth with an immigrant background face many individual and interpersonal challenges that are associated with multiple emotional and behavioral outcomes, including aggressive behavior, ethnic discrimination, problems deciding on an ethnic identity, or rejection by in-group members for not upholding cultural values and traditions. The present study takes a different approach by

examining immigrant status in relation to various mental health and behavior problems. This may represent a further step towards a better understanding of early adolescent mental health issues in multicultural contexts.

Goals of Aggression

Reactive and proactive types of aggression have been identified according to their “whys” and “whats” or form, such as verbal, physical or indirect (relational) aggression (Little, Jones, Heinrich & Hawley, 2003). A more recent framework for the study of aggression in children and adolescents focuses on *which* social goals the offender wants to achieve, either feeling power over other people, expressed in power-related proactive aggression, or obtaining a sense of affiliation with others, expressed through affiliation-related proactive aggressive behavior (Roland & Idsoe, 2001). According to Roland & Idsoe (2001), positive emotions could be present when a single aggressor humiliates a victim to obtain power or when two or more aggressors jointly attack a victim to gain a sense of affiliation. In the latter case, the relationship between the aggressors is also important. When collectively attacking a victim, the aggressors typically agree between themselves that the victim has negative attributes, further increasing the sense of affiliation between them (Roland & Idsøe, 2001).

To date, only three studies in three different countries have examined immigrant-status variation in reactive and power- and affiliation-related proactive aggression (Fandrem, et al., 2009; Strohmeier, et al., 2012; Solomontos-Kountouri, et al., 2016). A common finding of all three studies was that affiliation-related proactive aggression was more strongly associated with bullying in immigrant boys, especially first-generation immigrants, compared to non-immigrants. The present study explores whether these patterns of relations between

pro- and reactive aggression and bullying can be generalized to a broader spectrum of mental health problems and in younger age groups.

Aim of the Study

The aim of this study was to explore the associations of three different types of aggression (reactive aggression, power-related proactive aggression and affiliation-related proactive aggression) with emotional and conduct problems and to determine whether these associations were moderated by gender and/or immigrant/non-immigrant background in Norway.

Method

Sample

Data were provided by students in fifth to eighth grade (10 – 15 years) from multicultural schools in the two most populous Norwegian cities, Oslo and Bergen. The students participated in the Youth, Culture and Competence study at the Norwegian Institute of Public Health in 2008 and 2009 (www.fhi.no/studier/ungkul). The study was approved by the Norwegian Data Inspectorate and the Regional Committee for Medical Research Ethics. The proportion of immigrants in Bergen was close to the national average (approximately 14%), while almost one-third of the Oslo population had an immigrant background (i.e., approximately 14%). They were born in Norway themselves or they had parents who were born in Norway (Statistics Norway, 2019) at the time of data collection. The schools were recruited from sections of the city where the non-western immigrant population varied from 5.2% to 38.7% ($M = 25.5\%$). In addition, early adolescents with Tamil and Turkish origin

from other schools were oversampled and recruited through collaboration with immigrant nongovernmental organizations.

All early adolescents in the relevant grades were invited to participate through information sent home from school. The students' participation was contingent on written consent from their parents.

The mean participation rate in schools was 70%. There was substantial variation in participation between schools and classes that primarily depended on the efforts the teachers made to explain the study to parents and ensure that the consent forms were returned to school. While early adolescents with Tamil and Turkish backgrounds who were recruited through public schools in general agreed to take part in the study, the participation rate of early adolescents recruited through immigrant networks was considerably lower.

Altogether, 2011 students participated. As shown in Table 1, we excluded 140 students with one Norwegian parent and one foreign-born parent as well as 113 immigrant students with origins in Western Europe, the United States of America, or Oceania. Thus, the final study sample included 1759 students. Of these, 862 (49%) were of immigrant background, i.e., they had two foreign-born parents. They came from 63 different non-Western countries. The four national groups that included more than 50 participants were Somalis, $N = 62$, Turks, $N = 64$, Tamils from Sri Lanka, $N = 140$, and Pakistanis, $N = 212$. The majority of students with immigrant backgrounds, 69.5% and 75.7% of the boys and girls, respectively, were born in Norway. The gender distribution was similar in the immigrant and non-immigrant samples, 49.5% and 48.2% boys, respectively (Table 1).

- Insert Table 1 about here -

Procedures

During two school lessons, participants responded to a questionnaire designed to examine individual, sociocultural and other psychosocial factors relevant to psychological adaptation and mental health in multicultural settings. Trained research assistants were present in the classroom to assist the students by clarifying questions when needed or supporting students who, for other reasons, had difficulties completing the questionnaire. The additional students with Tamil origin were gathered in groups in the Tamil Resource and Counselling Centre after their weekly mother-tongue classes. The oversampled students with Turkish backgrounds, accompanied by their mothers, were gathered on one weekday evening to fill in questionnaires followed by a small dinner party.

Measures

Reactive, power-related and affiliation-related proactive aggression were measured with scales developed by Roland and Idsøe (2001). This instrument was developed to capture the individual tendency or motivation to behave aggressively rather than the aggressive behavior itself. *Reactive aggression* consisted of six items describing general experiences of anger and anger-provoking situations, such as “Sometimes I get so angry that I don’t know what I’m doing.” *Power-related proactive aggression* was measured by four items about being powerful by scaring others, such as “I like to have power over others so that they are afraid of me.” *Affiliation-related proactive aggression* comprised four items about participating in socially unacceptable or deviant behavior to obtain alliances with other peers. An example item is “I feel that we become friends when we do something illegal together.” Students marked how often the described situations happened to them on a 5-point Likert-type

scale from 1 (never) to 5 (very often). In two earlier large-sample studies (one of which included immigrants), a three-factor structure for these scales was confirmed, and good internal consistency was demonstrated (Roland and Idsoe, 2001; Fandrem et al., 2009).

Emotional and conduct problems were measured with five items each of the self-report version of the Strengths and Difficulties Questionnaire, SDQ (www.sdqinfo.com). The 25-item SDQ includes four problem subscales in addition to a prosocial dimension of symptoms experienced over the last month and has been used extensively worldwide to screen for psychiatric problems. The psychometric properties of the SDQ have been evaluated as satisfactory both in terms of interinformant reliability (Mellor, 2004; Goodman, 2001) and internal consistency of the self-report versions (Becker, Hagenberg, Roessner, Woerner, & Rothenberger, 2004; Muris, Meeste, Eijkelenboom, & Vincken, 2004; Rønning, Handegaard, Sourander, & Mørch, 2004). The predictive validity of the SDQ problem subscales and the added impact assessment with respect to clinical diagnoses of conduct, emotional and hyperactivity disorders has been supported in different countries, such as Britain and Bangladesh (Goodman, Renfrew, & Mullick, 2000). The emotional problems subscale involves items of psychosomatics, anxiety, and depression, such as “I worry a lot.” Conduct problems are assessed by items of rule breaking and deviant behavior, such as “I’m frequently accused of cheating,” “I fight a lot” and “I can get others to do what I want.” The students marked whether each item was “not true” (0), “somewhat true” (1) or “certainly true” (2) for them. The SDQ has also previously been validated across age (including early adolescents) and with adolescents of immigrant status in Norway (Alves, Røysamb, Oppedal, & Zachrisson, 2011; Richter, Sagtun, Heyerdahl, Oppedal & Røysamb, 2011).

Perceived family economic hardship, which has been demonstrated to play a key role in mediating between stressful family economic conditions and emotional and behavioral

problems, was used as a proxy for parental socioeconomic status (Conger, Conger, Matthews & Elder, 1999). Students marked four items, such as “How much of a problem does your family have because your parents do not have enough money to buy things your family needs or wants?” from 1 (no problem at all) to 4 (a very serious problem). A mean sum score of the scale (Cronbach’s alpha = .71 & .76 for immigrant and non-immigrant early adolescents, respectively) was implemented in the structural equation model (SEM).

Analyses

An ANOVA with Tukey’s test was conducted to test subgroup differences in mean levels. To compare the reported average levels among groups, Cohen’s *d* (Cohen, 1988) was calculated. Cohen suggested $d = 0.2$ as a small effect, 0.5 as a medium effect, and 0.8 as a large effect. To examine the associations between aggression and emotional and conduct problems, SEMs were analyzed using Mplus 7.11 (Muthen & Muthen, 2013). To interpret the associations, Gignac and Szodorai (2016) suggested $.10$ as a relatively small effect, $.20$ as a typical effect, and $.30$ as a relatively large effect. A multiple group framework was applied to test whether gender and/or being an immigrant (i.e., ‘cultural group’) interacted with the predictors in the models. Alternative models were compared using chi-square difference tests. Goodness of fit was evaluated by the use of frequently applied indices (Browne & Cudeck, 1993). The root mean square error of approximation (RMSEA) is reported; values below $.05$ indicate close fit, while values below $.08$ indicate fair fit (Browne & Cudeck, 1993).

Regarding missing answers, it is plausible that many of the missing values could be attributed to variations in language skills, which could be related to ethnicity as well as to economic hardship, age and gender (i.e., girls read better than boys). Because all of these variables are in the SEM model, we considered missing answers to be missing at random

(MAR) after handling this with the full information maximum likelihood (FIML) procedure as implemented in MPLUS.

Results

Descriptive findings

Preliminary analyses showed nonsignificant differences between 1st- and 2nd-generation immigrants in all mental health and aggression variables; consequently, all students with immigrant backgrounds were analyzed as one group.

Descriptive information for the study variables is presented separately for immigrant- and non-immigrant background boys and girls in Table 2. Non-immigrant boys and girls reported significantly higher levels of reactive aggression than immigrant boys ($d = -.26$, $p < .01$) and girls ($d = -.22$, $p < .01$). The difference in power-related proactive aggression was significant only among the boys ($d = -.21$, $p < .01$). In contrast, non-immigrant boys ($d = .23$, $p < .01$) and girls ($d = .39$, $p < .001$) reported lower levels of affiliation-related aggression than immigrants. According to the recommended cutoff values for Cohen's d (Gignac & Szodorai, 2016), the difference in affiliation-related aggression for girls was relatively large, while the other significant differences were of relatively medium size. Emotional problems were also ranked lower among non-immigrant boys ($d = .29$, $p < .001$) and girls ($d = .16$, $p < .05$) than immigrants, revealing a medium-sized difference for boys and a relatively small difference for girls.

- Insert Table 2 about here -

Associations between Aggression and Emotional and Conduct Problems

Measurement models.

Emotional problems and conduct problems. The measurement models for the two dimensions of the SDQ (emotional problems and conduct problems) were estimated simultaneously. All parameters were constrained to remain equal across immigrant status and gender. Our initial solution produced a fair fit to the data, but only according to some of the fit indices, SRMR = .067; RMSEA = .058, 90% CI (.051, .064), CFI = .80; TLI = .80. Inspection of the output showed that one of the items (“I usually do what I’m told”) caused problems in all four groups. After removing this item, we had an acceptable fit to the data according to the criteria suggested by Browne and Cudeck (1993), SRMR = .061; RMSEA = .053, 90% CI (.045, .060), CFI = .89; TLI = .89.

Reactive and proactive aggression. The measurement models for the three dimensions of aggression were estimated simultaneously. The initial solution gave a fair fit to the data, but again according to only some of the fit indices, SRMR=.085; RMSEA=.071, 90% CI (.067, .076); CFI=.80; TLI=.80. Inspection of the Mplus output showed that the modification index suggested freely estimating item intercepts in some of the groups. This was done if it was considered conceptually meaningful. After allowing these intercepts to be estimated separately, we obtained an acceptable fit, SRMR = .076; RMSEA = .059, 90% CI (.054, .064); CFI = .87; TLI = .86.

Structural models.

Gender and immigrant status. To test whether gender and immigrant status moderated the effects¹ in the hypothesized model, multiple group SEM models were estimated. A model with structural parameters constrained to remain equal across gender gave a fair fit to the data, SRMR = .066; RMSEA = .046, 90% CI (.043, .048); CFI = .86; TLI = .84. An unconstrained solution did not present significant improvement in goodness of fit, $\Delta\chi^2(6) = 6.53, p > .05$. The same occurred if there were unconstrained parameters for emotional problems only ($\Delta\chi^2(3) = 2.58, p > .05$) or for conduct problems only ($\Delta\chi^2(3) = 3.93, p > .05$). Consequently, the hypothesis that gender moderated the effects of the aggression variables on emotional and conduct problems was not supported.

Next, a model with structural parameters constrained to remain equal across the immigrant status group was tested. This model also gave a fair fit to the data, SRMR = .068; RMSEA = .048, 90% CI (.045, .051); CFI = .86; TLI = .85. Even though a free model did not present a significant improvement in the total model fit ($\Delta\chi^2(6) = 7.82, p > .05$), there was an improvement if the effects of the aggression variables on emotional problems were set free across the immigrant status group ($\Delta\chi^2(3) = 8.39, p < .05$). Consequently, immigrant status moderated the effects on emotional problems.

The two-group model. Because of the above findings, the data for boys and girls were pooled into one group, and gender was entered as a control variable instead. Then, a model in which the effects of the aggression variables on conduct problems were constrained to remain equal across immigrant status was estimated, and the effects of the aggression variables were unconstrained on emotional problems. This model presented an acceptable fit to the data,

¹ We do not have design support for using the term effect. It should be understood as a technical term indicating hypothesized directions of associations based on conceptual issues and previous research.

SRMR = .057; RMSEA = .046, 90% CI (.044, .049); CFI = .86, TLI = .85. The parameters are displayed in Figure 1.

- Insert Figure 1 about here -

With respect to the predictive variation associated with immigrant status, reactive aggression had a significantly stronger effect on emotional problems among early adolescents of non-immigrants ($\beta = .70, p < .01$) than among early adolescents of immigrants ($\beta = .41, p < .01$). Nevertheless, the coefficients were quite strong for both groups according to the criteria suggested by Gignac and Szodorai (2016). The effects of power-related proactive aggression on emotional problems were also significantly stronger among non-immigrant early adolescents than among immigrant early adolescents ($\beta = -.58, p < .01$ and $\beta = -.30, p > .05$, respectively). In the latter group, the effect of power-related proactive aggression on emotional problems was not significant ($\beta = -.30, p > .05$). However, regarding affiliation-related proactive aggression, the opposite pattern occurred: the effect was relatively strong in the immigrant group ($\beta = .37, p < .01$) but more typical in the non-immigrant group ($\beta = .25, p < .05$).

The effects of aggression on conduct problems were strong for both groups. The effects of reactive aggression ($\beta = .43, p < .01$) and power-related proactive aggression ($\beta = .44, p < .01$) were approximately the same size. There was no significant effect of affiliation-related proactive aggression on conduct problems ($\beta = -.01, p > .05$) (Figure 1).

Discussion

The findings of our study showed that reactive and proactive aggression was differently related to emotional and conduct problems for immigrant and non-immigrant early adolescents. Only reactive and power-related proactive aggression was associated with conduct problems, and this result was independent of immigrant status. The association between reactive and power-related proactive aggression, on the one hand, and emotional problems, on the other hand, was stronger for non-immigrant than for immigrant early adolescents, while the association between affiliation-related proactive aggression and emotional problems was stronger for immigrant-background than for non-immigrant early adolescents.

Aggression and Conduct Problems

The relations between all three aggression dimensions on the one hand and conduct problems on the other were similar for immigrant and non-immigrant background early adolescents. The positive association between reactive and power-related proactive aggression with conduct problems in both immigrant status groups is in accordance with findings from previous studies, especially with regard to proactive aggression (Fandrem et al, 2009; Fite, et al., 2010; Strohmeier et al. 2012;). Thus, these patterns of associations may be general across age groups and study samples in high-income countries. On the other hand, they could indicate that immigrant background early adolescents assimilate certain behavioral patterns from their non-immigrant peers as part of the acculturation process. Comparative studies that involve national groups in their home countries (e.g., Turks in Turkey) as well as in various immigrant-receiving countries (e.g., Turkish background immigrants in various countries) could shed more light on the generalizability of these findings.

In contrast, the finding that affiliation-related proactive aggression is not associated with conduct problems is not aligned with previous studies (Fandrem et al., 2009; Strohmeier et al., 2012; Solomontos-Kountouri et al., 2016). In these previous studies, the association of affiliation-related proactive aggression with bullying and aggressive (violent) behavior was stronger among immigrant youths. The older age of the participants in the previous studies may be one explanation because cognitive skills impact children's aggression (Tremblay, 2010). Future studies should involve more age groups to consider developmental perspectives on the motives for aggressive behavior. Another explanation might be that social motivations may be more relevant for unidimensional outcomes such as "aggressive (violent) behavior" (Strohmeier et al., 2012) and "bullying" (Fandrem et al., 2009) than for the more comprehensive, multidimensional concept of major violation of several societal norms or rules involved in conduct problems (American Psychiatric Association, 2013). Thus, affiliation may provide a stronger motivation to bully and behave violently among early adolescents with immigrant backgrounds compared to non-immigrants, but these motives may not underlie more complex conduct problems. More studies are needed to better understand the role of affiliation in aggressive behavior.

Aggression and Emotional Problems

In contrast to conduct problems, all associations between aggression and emotional problems differed significantly between the non-immigrant and immigrant-background groups. Power-related proactive aggression was not related to emotional problems among immigrant early adolescents, but it was related among non-immigrants. One may speculate that the more powerful one feels, the fewer emotional problems he or she has because having power is related to having control. The reason why there was a relation only for non-immigrants might be related to the emphasis on personal autonomy and control in

individualistic societies such as Norway compared to the collectivistic orientation of the cultures of origin of the immigrants in the present study (Li, Wang, Wang & Shi, 2010; Hofstede, 2001). The association between reactive aggression and emotional problems was also stronger for the non-immigrant group, while the association between affiliation-related aggression and emotional problems was stronger for the immigrant group. This implies that there is higher comorbidity between reactive aggression and emotional problems among non-immigrant early adolescents and higher comorbidity between affiliation-related aggression and emotional problems among immigrant early adolescents. This information may be useful for clinicians regardless of whether their clients have been referred because of aggression or because of emotional problems. Despite variation in the associations between aggression and emotional problems between the non-immigrant and immigrant-background samples, the pattern, i.e., the positive or negative associations, were the same among them.

In accordance with Li and colleagues (2010), we predicted that cultural norms and values would underlie variation in associations between aggression and emotional problems. However, it might be more likely that there may be variation in the types of stressors and in the strength of associations of the stressors between aggression and emotional problems. Hypothetically, certain kinds of stressors, such as parent-child conflicts, may be more strongly related to reactive aggression and emotional problems among non-immigrant compared to immigrant early adolescents. Moreover, immigrant-background youth are exposed to a variety of stressors specific to acculturation that influence both reactive and affiliation-related aggression and emotional problems among them (Gjelsvik & Solhaug, 2017; Keles et al., 2015; Oppedal, 2017a; Oppedahl et al. 2005; Titzmann, Silbereisen, Mesch & Schmitt-Rodermund, 2011). A better understanding of the underlying mechanisms of the associations

between aggression and emotional problems and immigrant status variations in these mechanisms can shed more light on the etiology of mental health problems.

Limitations and Future Studies

Given that children and adolescents rate their own conduct problems as less severe and their emotional problems as more severe than their parents would rate them (Kazdin, Esveldt-Dawson, Unis & Rancurello, 1983), the use of self-reports in our study could have been strengthened by including teacher and/or parent reports. However, while teachers collaborated with the research team in sending out and collecting the consent forms, the principal protected them from being informants because of their already heavy workload. Although the parents agreed to their children's participation in the study, they were reluctant to participate themselves.

There is a possibility of gender and/or culturally related biases in reporting these types of problems. However, in several previous studies, both the aggression variables and SDQ have shown good psychometric properties across different gender, cultural, and immigrant groups (Alves et al. 2011; Fandrem et al. 2009; Heiervang, Goodman & Goodman, 2008;).

Some of the fit indices for our models were slightly below the cutoff values for close fit, so readers should interpret our findings with this in mind. However, all the RMSEA values were well below the recommended cutoff values for fair fit as suggested by Browne & Cudeck (1993), which supports the validity of our model.

The cross-sectional design of our study cautions against any conclusions about causality. Future longitudinal studies may better inform about the direction of the effects between aggression and conduct and emotional problems.

It was outside the scope of this study to examine age group variations and variations regarding nation of origin; however, this is also an important topic for future studies.

Conclusion and Practical Implications

Given the importance of early intervention and the differences in the development of cognitive skills between older and younger adolescents, there is a need for research studies that specifically target early adolescents. To our knowledge, this is the first study to explore immigrant status variation in relation to the associations between affiliation- and power-related proactive aggression and emotional problems in a preadolescent sample. Considering the higher levels of emotional problems among immigrant-background early adolescents, the differences in associations with aggression dimensions between immigrants and non-immigrants are intriguing. The findings raise a series of new questions that should be explored in future studies to shed more light on the mental health and behavioral problems of children and youth in multicultural contexts. Furthermore, knowledge that the etiology of mental health problems may differ for different groups can be useful for clinical psychologists to plan treatment for different people as well as for school psychologists in designing prevention and interventions targeting aggression among early adolescents in multicultural school contexts.

ABOUT THE AUTHORS

Professor Dr. Hildegunn Fandrem holds a professor position at the Norwegian Centre for Learning Environment and Behavioural Research in Education, University of Stavanger, Norway.

Dr. Brit Oppedal holds a position as a senior researcher at the Norwegian Institute of Public Health, Norway.

Professor Dr. Thormod Idsoe holds a position as a senior researcher at the Norwegian Center for Child Behavioral Development, Norway.

DISCLOSURES

The authors declare that there are no conflicts of interest.

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