

RESEARCH ARTICLE

Patterns of support to adolescents related to disability, family situation, harassment, and economy

Berit Møller Christensen¹  | Maria Björk² | Lena Almqvist³ | Karina Huus²

¹ CHILD Research Group, Department of Natural Science and Biomedicine, School of Health and Welfare, Jönköping University, Jönköping, Sweden

² CHILD Research Group, Department of Nursing Science, School of Health and Welfare, Jönköping University, Jönköping, Sweden

³ School of Health, Care and Social Welfare, Mälardalen University, Västerås, Sweden

Correspondence

Berit Møller Christensen, Department of Natural Science and Biomedicine, School of Health and Welfare, Jönköping University, Jönköping S-551 11, Sweden.
Email: berit.moller-christensen@ju.se

Funding information

FORTE, Grant/Award Number: 2015-0058; Futurum, Jönköping County, Grant/Award Number: 2014/3821-271; Sunnerdahl Disability Foundation, Grant/Award Number: 40-14; Säfstaholm Foundation, Grant/Award Number: ST-2014-023; Swedish Research Council Formas; Sweden's Innovation Agency (VINNOVA); Swedish Research Council for Health, Working Life and Welfare (FORTE); the Swedish Research Council (VR), Grant/Award Number: 259-2012-25

Abstract

Introduction: Adolescents need support from family, friends, and teachers to increase their involvement in everyday life. Their environment and their own characteristics also influence their ability to participate in an everyday supportive environment.

Aim: The aim of the study was to investigate patterns of support from parents, teachers, and very important persons such as peers to the ability of adolescents to participate in everyday life, as well as the importance of interpersonal relations as experienced by the adolescents.

Method: The study has a cross-sectional design. The data compiled and analysed in this study are part of a longitudinal study of adolescents and their development into adults—LoRDIA (Longitudinal Research on Development In Adolescence). A combination of person- and variable-oriented design was used to capture patterns of support.

Results: Adolescents with a complicated home situation and low economic prerequisites who received little support from parents and friends participated to a lower degree in home activities. A substantial number of these adolescents had self-reported neurodevelopmental disorders and, as a group, were more often exposed to harassment. However, these adolescents participated to a higher extent in school activities, although they received little support from the teachers. The adolescents who received most support from parents and teachers were those with a country of origin other than Sweden and those who lived with both of their parents and had more siblings than average. However, this did not mean that they participated to a higher extent in home and school activities.

KEYWORDS

adolescents, cluster analysis, support

1 | INTRODUCTION

Through puberty, adolescents face many demands and challenges when developing cognitive skills and getting a clearer sense of personal and sexual identity (Christie & Viner, 2005). Their relationships with their family and peers change (Currie et al., 2012) as they gradually increase their independence emotionally, personally,

and financially from their parents (Christie & Viner, 2005). However, adolescents still need support from family and friends to help them cope with their daily life, stressors, and health (Currie et al., 2012).

Older adolescents tend to have more problems communicating with their families, experience greater psychological discomfort, and find it easier to communicate with peers. Girls tend to have unmet

communication needs with family and peers and also express more psychological complaints (Moreno et al., 2009). Adolescents who are involved in social networks, e.g. sports or cultural organisations, rate their life satisfaction higher. They also perceive their health as excellent (Zamboni et al., 2010). Support in school also affects adolescents and high achievers report higher levels of life satisfaction (Currie et al., 2012). Adolescents' self-esteem and grading are positively associated with their perceptions of teacher and student-student support (Jia et al., 2009).

Having special needs can impact adolescents' chances of participating in everyday life. For example, adolescents diagnosed with a neurodevelopmental disorder (NDD) with autism spectrum disorder and attention-deficit/hyperactivity disorder often face difficulties in social participation. They are more likely never to see friends outside of school, to have friends not phoning them, and never to be invited to participate in social activities (Shattuck, Orsmond, Wagner, & Cooper, 2011). They struggle in their relationships with peers (Hoza et al., 2005) and family (Barkley, Fischer, Edelbrock, & Smallish, 1991). A recent study undertaken in Sweden showed that this group of adolescents is more exposed to harassment (Fridh, Köhler, Modén, Lindström, & Rosvall, 2018). Thus, being an adolescent with NDD is especially challenging, due to an increased risk of mental health problems and exclusion from common everyday-life situations.

Health is related to the ability of adolescents to do the activities they want and their chances of participating in an everyday supportive environment (Almqvist, Hellnäs, Stefansson, & Granlund, 2006). The International Classification of Functioning, Disability and Health for Children and Youth presents a classification of components that impacts adolescent's ability to function in everyday life (WHO). The components described in the International Classification of Functioning, Disability and Health for Children and Youth are related to their body functions and body structures, their ability to participate in activities in life, and factors in their environment that can influence their participation in life. Participation can be defined as the adolescent's involvement in a life situation (ibid.) and is the internal state of individuals' focus and effort to be involved, which is affected by the environment (Imms et al., 2017). For example, this could be experienced when the family increases the adolescent's engagement with the home environment, provides choices and opportunities to take part in decision making for the adolescent to exercise control and regulation, and encourages the development of healthy self-esteem (Brotherson, Cook, Erwin, & Weigel, 2008). Factors that influence the possibility of participating include activity competence, sense of self, and preferences. Activity competence is the ability to execute the activity according to an expected standard that includes cognitive, physical, and affective skills and abilities (Imms et al. 2016). The sense of self relates to a personal perception of one's confidence, satisfaction, self-esteem, and self-determination. A low sense of self decreases the possibility of participating and being involved in activities in everyday life (Imms et al., 2017).

The physical and social environment and limited resources can act as barriers to participation (Coster et al., 2013). Imms et al. (2017)

Key message

- The support needs of adolescents with neurodevelopmental disorder and a complicated home situation must be further acknowledged, because they are more exposed to harassment but perceive little or no support from peers and family. This especially concerns support outside of formal situations, where the support seems to be most absent.
- School need to take on a larger responsibility and pay attention to female adolescents with neurodevelopmental disorder of other country of origin, because they are more commonly exposed to sexual harassment at the same time perceiving little support from peers and family.

argue that the environment refers to the broader, objective social, and physical structures with which we live. Adolescents who live in families with a lower income than their neighbours experience greater internalizing (i.e., withdrawal, somatic complaints, and anxious/depressed syndromes) and externalizing (i.e., delinquent and aggressive behaviours) problems like loneliness and social dissatisfaction (Sorhagen & Wurster, 2017). Environmental barriers such as low family cohesion and economical burdens are risk factors for low participation but might be especially challenging for adolescents with NDD. These adolescents also face an increased risk of being excluded from other sources of support, such as school and peer groups. Adolescents with NDD, like other adolescents, want to be more independent from their parents but still needs support from family, friends, and teachers to participate in everyday life situations. However, both the environment and the adolescents' own characteristics influence their support patterns. Research within this area is sparse, and it has not previously been shown whether the family situation and social status or self-reported symptoms of NDD can be related to support from parents and people outside the family, that is, peers and teachers.

2 | AIM

The aim was to investigate patterns of support from parents, teachers, and very important persons, that is, peers, related to the ability of adolescents to participate in everyday life and how these support patterns relate to individual and environmental characteristics.

Are adolescents' support patterns related to individual characteristics, that is, self-reported NDD, sex, country of origin other than Sweden, and participation in home and school situations?

Is the support adolescents receive related to environmental characteristics, that is, having siblings, having parents who live together, the home situation, being sexually harassed, and family economy?

3 | METHODS

3.1 | Study design

The study has a cross-sectional design. The data compiled and analysed are part of a longitudinal study of adolescents and their development into adults—LoRDIA (Longitudinal Research on Development In Adolescence).

3.2 | Data collection and participants

The project was undertaken in Sweden and focused on the transition from childhood to adolescence in relation to family, teachers and peers, mental health, and the use of alcohol and drugs. The data were collected in four municipalities in south and south-west Sweden. A total of 2,021 pupils were invited to participate, and all the parents and adolescents were informed in writing. Passive consent was requested from the parents. The adolescents gave their consent by filling in the questionnaire.

A questionnaire was distributed to all pupils in years 6 and 7 in 33 compulsory schools and in 128 classrooms for pupils with intellectual disabilities. The questionnaire was distributed in the classroom, and the data were collected as self-reports. In total, 1,520 pupils filled in the questionnaire: 1,378 used the original form, and 142 used a version adapted for children with cognitive impairments. The pupils' ages ranged from 11 to 14 years of age ($M = 12.6$ years, $SD = 1.4$); (Table 1).

Members of the research team were present in the classroom during the data collection in case the pupils needed support with the questionnaire.

3.3 | The questionnaire

The questionnaire consisted of background variables such as sociodemographic data and family structure and questions about the

adolescents' development and well-being. Areas studied in this paper were the adolescents' perception of their relationship with their parents, teachers, and peers; their engagement at home and in school; harassment; and their perception of the family's economic status. The questionnaire was compiled of questions based on instruments that have been validated internationally or previously used with pupils in Swedish studies. This adapted version consisted of these same questions, except for one that was removed following a pilot study, because it was judged to be too abstract for the adolescents with intellectual impairments.

The psychometric property of the questionnaire has been evaluated and found to be satisfactory for both the original and the adapted version of the questionnaire (Cronbach alpha 0.7–0.8); (Lygnegård, 2018). The adapted version was designed to suit pupils with intellectual disabilities in terms of linguistics and number of response options.

3.4 | Cluster variables

For the purpose of the study, four indexes were compiled that defined the clusters. They were labelled according to the contents of the questions regarding support within each of these specific areas, which are explained further below.

3.4.1 | Support from parents

This index consisted of five statements: "I know that my parents are available when I need them," "I feel confident trying new things because I know my parents will support me," "I can share personal thoughts and feelings with my parents," "When I am angry, sad or worried, my parents make me feel better," and "My parents encourage me to realise my dreams." All the answers were ranked on a scale with seven response options from "does not apply at all" to "applies very well." All questions were answered by both parents of the adolescent, if applicable ($M = 2.67$, $SD = 0.43$). Cronbach's alpha 0.877.

3.4.2 | Support from teachers

This index consisted of five questions: "Do the teachers in the school care about you?", "Can you talk to the teacher in the school about things other than those concerning the school?", "Do you have teachers you can talk to if you have problems concerning the school?", "Do the teachers praise you when you do good work?", and "Do the teachers treat you fairly?" The answers were all ranked on a scale with three response options ($M = 1.54$, $SD = 0.54$). Cronbach's alpha 0.803.

Support from a very important person is defined as the first person the adolescent thinks of apart from his/her parents. This index consisted of 10 statements: "My peer supports me when I have argued with my parents," "We often get on each other's nerves," "My peer would like me even if nobody else did," "We often argue," "My peer says 'I am sorry' when he/she has been unkind," "We often get angry with each other," "My peer keeps promises," "My peer does not tell secrets about me to others," "My peer stands up for me when others talk behind my back," and "We often quarrel." The answers were all ranked

TABLE 1 Demographic data of participants

Participants	Number	%
Sex		
Male	739	48.6
Female	780	51.4
Child age in years		
11 years	25	
12 years	674	
13 years	716	
14 years	104	
Siblings	1350	88.8
Born in Sweden	1429	94.0
NDD	249	16.4
Both parents alive		97.7
Parents living together		73.9

on a scale with five response options from “does not apply at all” to “applies very well” ($M = 3.52$, $SD = 0.34$). Cronbach's alpha 0.775.

3.4.3 | Interpersonal relations

This index consisted of three questions and a statement: “Is it important to make new friends?”, “Is it important to get along well with friends?”, “Is it important to be with your boyfriend/girlfriend?”, and “My sibling(s) and I have a lot of fun.” Three of them were ranked on a scale with three response options, and one question was ranked on a scale with four response options ($M = 2.71$, $SD = 0.39$). Cronbach's alpha 0.310.

3.5 | Independent variables

The independent variables consisted of indexes representing engagement at home and in school and perception of harassment.

3.5.1 | Engagement in school

This index was compiled of three questions: “Are you satisfied with your performance in school?”, “Are you doing your utmost in school?”, and “Do you feel forced to go to school?” The response options included “most often,” “quite often,” “sometimes,” “once in a while,” and “almost never” ($M = 1.73$, $SD = 0.374$). Cronbach's alpha 0.464.

3.5.2 | Engagement at home

This index was compiled of four questions: “How often do you do grocery shopping?”, “How often do you prepare a meal?”, “How often do you do laundry?”, and “How often do you tidy your room?” The response options included “never,” “sometimes,” and “often” ($M = 0.628$, $SD = 0.43$). Cronbach's alpha 0.628.

3.5.3 | Harassment

This index was compiled of nine questions: “Has anybody spread sexual rumours about you?”, “Has anybody forced you into a corner and taken off your clothes?”, “Has anybody called you a whore, slag, hooker, dick, gay or other bad (disparaging or offensive) words?”, “Has anybody showed you offensive pictures, photos, drawings or messages (via text message)?”, “Has anybody commented on the way you look or your body in a sexual way that you didn't like?”, “Has anybody touched your body in a sexual way that you experienced as negative?”, “Has anybody joked about or gesticulated in a sexual way that you experienced as negative?”, “Have you been exposed to any of the above-mentioned questions during this term?”, and “Have you, yourself, at any time during this term said or done any of the above-mentioned to others?” The response options included “never,” “sometimes,” “monthly,” “weekly,” and “daily,” ($M = 1.19$, $SD = 0.254$). Cronbach's alpha 0.787.

The questionnaire also contained four questions regarding the pupils' perception of the families' economic status: “Does your family

travel abroad”, “How is your family's economy compared with others in the area where you live?”, “If you were to compare yourself to others in your class – do you have more or less money to spend?”, “If you want to buy something very expensive (i.e. a computer, skateboard, mobile phone, etc.), can your parents afford to buy it if they agree that you need it?” ($M = 2.25$, $SD = 0.46$). Cronbach's alpha 0.648.

3.6 | Data analysis

A person-oriented approach was chosen to capture patterns of support. A cluster analysis was performed using the statistical package SLEIPNER version 2.1. A variable-oriented approach was used to study relationships between support patterns and the sociodemographic and outcome variables of participation in school and home situations. These analyses were performed with IBM Statistics SPSS version 24.

The cluster analysis was performed according to Ward's method (Bergman, 2003). The number of clusters were decided based on considerations regarding a meaningful variation of pupils within the clusters, homogeneity in clusters (i.e., cluster centroids preferably <2.0), and an explained variance (error sum of square, ESS) of approx. 63%.

A one-way analysis of variance between groups was performed with a Scheffé post-hoc test to compare children with different patterns of support for adolescent and environmental characteristics. Chi-square analyses were conducted to analyse background information, such as sex, language spoken at home related to country of origin, and NDD in relation to support patterns. In this study, NDD is self-reported and includes children with speech, writing and calculation, and psychiatric difficulties (MBD, minimal brain dysfunction DAMP, Deficits in Attention, Motor control and Perception and ADHD, attention-deficit/hyperactivity disorder, Asperger syndrome/autism, and developmental disorders.

4 | ETHICAL CONSIDERATIONS

The Longitudinal Research on Development In Adolescence project was approved by the Regional Research Review Board in Gothenburg, Sweden (No. 362–13; 2013-09-25).

The adolescents and their parents were informed of the study in writing, and the teacher of each class was also informed. It was stressed that participation was voluntary; hence, answering the questionnaire meant participating in the study. This passive consent was used to also include adolescents from families in which participation in this kind of research may not be prioritised.

5 | RESULTS

The hierarchical cluster analysis produced nine clusters, explaining 62% of ESS. Seven cases were considered outliers, meaning their support patterns were too different to fit into any of the clusters. The results from each cluster are presented separately and compiled in Table 2.

TABLE 2 Comparisons of clusters on child support outcomes

Cluster	Support from parents	Support from teachers	Support from friends	Interpersonal relationship	Total support
Cluster 1	+	--	+	++	+2
Cluster 2	=	=	--	-	-3
Cluster 3	-	++	+	=	+2
Cluster 4	---	+	-	-	-4
Cluster 5	+	-	+	-	0
Cluster 6	+	+	+	-	+2
Cluster 7	+	+	+	+	+4
Cluster 8	+	-	-	+	0
Cluster 9	--	=	+	-	-2

6 | COMPARISONS OF CLUSTERS ON ADOLESCENT SUPPORT OUTCOMES

Comparisons of clusters were performed with regard to adolescent support outcomes. The results are shown in standard deviations, except the total means for everyone included, that is, (+) = one SD above mean and (-) = one SD below mean (Table 2). The patterns of support regarded the adolescents' perception of support from their parents, teachers, and peers and interpersonal relationships (Figure 1).

The results from an analysis of variance in which the patterns of support produced in the cluster analysis were compared regarding engagement and participation at home and in school, and harassment indexes showed significant differences in engagement and participation at home but not in school (Table 3).

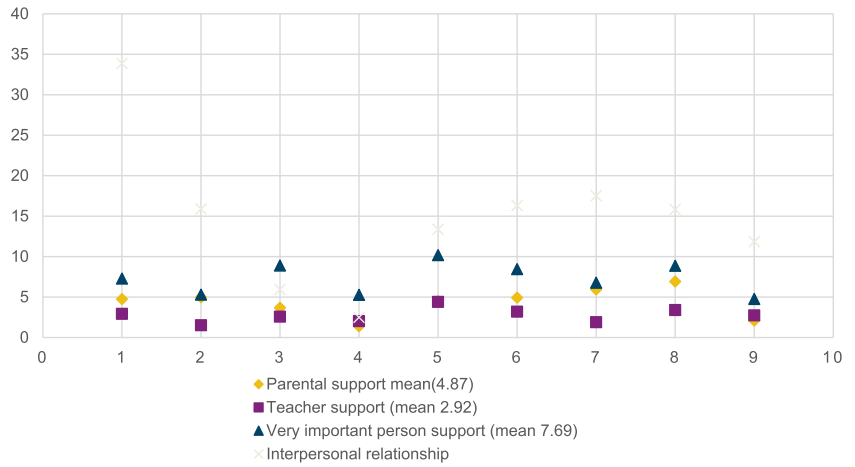


FIGURE 1 Patterns of support included in the cluster analysis [Colour figure can be viewed at wileyonlinelibrary.com]

TABLE 3 One-way ANOVA results for adolescents' perceived engagement and participation

Variable	Sample mean (SD)	Cluster 1 a	Cluster 2 b	Cluster 3 c	Cluster 4 d	Cluster 5 e	Cluster 6 f	Cluster 7 g	Cluster 8 h	Cluster 9 i	F values
Adolescent's participation at home	2.54 (0.42)	2.66 (0.36)	2.46 (0.49)	2.57 (0.40)	2.38 (0.50)	2.47 (0.42)	2.51 (0.37)	2.64 (0.36)	2.60 (0.40)	2.44 (0.49)	6.0*
Adolescent's participation in school	1.70 (0.36)	1.52 ^{bcdfi} (0.21)	1.81 ^{acdeh} (0.34)	2.07 ^{abefghi} (0.41)	2.09 ^{abefgh} (0.51)	1.53 ^{bcdfi} (0.24)	1.73 ^{acde} (0.33)	1.64 ^{cd} (0.34)	1.65 ^{bcdi} (0.29)	1.83 ^{aceh} (0.36)	45.9*
Adolescents' being exposed to harassment	1.19 (0.25)	1.10 ^{cdi} (0.15)	1.21 ^c (0.25)	1.39 ^{abefh} (0.32)	1.36 ^{aefh} (0.41)	1.11 ^{cdi} (0.17)	1.18 ^{cd} (0.21)	1.23 (0.24)	1.15 ^{cd} (0.19)	1.27 ^{ae} (0.33)	19.7*

There is a significant difference between each pair of letters.

Regarding adolescents' engagement and participation in home and school activities: The higher the score, the higher the engagement.

Regarding harassment: The higher the score the more harassment is perceived.

Abbreviation: ANOVA, analysis of variance.

*One-way ANOVA significant at level $P < .001$.

7 | COMPARISON OF CLUSTERS ON INDIVIDUAL AND ENVIRONMENTAL CHARACTERISTICS

Statistical significances between the clusters were found regarding differences in sex, NDD, country of origin other than Sweden, parents living together, and if their economy was considered lower than that of others at school (Table 4).

More adolescents with NDD than statistically expected were found in Clusters 2 and 3. Cramer's V ($n = 1106$) = 0.15, $P = 0.002$.

8 | CLUSTER 1

8.1 | Adolescents with very good interpersonal relationships and fewer medical diagnoses

More girls and fewer adolescents with a country of origin other than Sweden were found in this cluster. More of the adolescents lived with both their parents and their economy was better than average.

The cluster pattern was characterised by little support from teachers but good support within interpersonal relationships. Overall, the adolescents in this cluster obtained more support than average. The cluster contained fewer adolescents with disabilities. The adolescents participated in home activities to the highest extent but to the lowest extent in school activities. The degree of harassment was very low.

9 | CLUSTER 2

9.1 | Adolescents with fewer interpersonal relationships and poor support from peers

This cluster was characterised by more boys and more adolescents with a country of origin other than Sweden, and thus, various languages were spoken at home. More adolescents with NDD were seen in this cluster. The cluster pattern was characterised by little support

from peers and poor interpersonal relationships. Overall, they had less support than average.

10 | CLUSTER 3

10.1 | A cluster with more girls and more harassment

This cluster contained more girls and was characterised by more support than average, especially from teachers and peers, but the adolescents were exposed to more harassment than average. The adolescents participated to a high extent in school activities.

11 | CLUSTER 4

11.1 | Adolescents with a complicated home situation but great participation in school

This cluster contained more girls and adolescents with a country of origin other than Sweden. More single households with more siblings than average and a lower economic status were found in this cluster. More adolescents with NDD were found in this cluster, which was characterised by less support than average from parents and within interpersonal relationships and from peers. The adolescents were exposed to more harassment than average. The adolescents had the lowest participation level in home activities but participated to the highest extent in school activities.

12 | CLUSTER 5

12.1 | Adolescents with a stable home situation and sociodemographic parameters at an average level

The cluster was characterised by more parents than average living together, but their economic status was lower than average. The

TABLE 4 Comparison of clusters and individual and environmental characteristics (percentages)

	Total	Cluster 1 $n = 215$	Cluster 2 $n = 166$	Cluster 3 $n = 91$	Cluster 4 $n = 46$	Cluster 5 $n = 177$	Cluster 6 $n = 140$	Cluster 7 $n = 93$	Cluster 8 $n = 230$	Cluster 9 $n = 85$	F values
Male	48.6 [†]	37.7	68.1	30.8	37	46.9	41.4	44.1	53	50.6	7.1*
[†] NDD	16.4	7.0	24.1	17.6	26.1	15.8	13.6	12.9	18.3	11.8	2.3*
Not born in Sweden	6.0	3.3	9.0	3.3	10.9	4.0	2.1	2.2	8.3	2.4	2.7*
Siblings	88.8	88.8	91.6	86.8	93.5	91.5	87.9	91.4	93.5	92.9	0.8
Parents living together	73.9	80.9	74.1	72.5	69.6	81.9	72.9	80.6	70.9	64.7	2.3*
Lower economy than others at school	18.6	6.5	19.9	18.7	23.9	10.7	17.1	15.1	14.3	30.6	4.7*

*One way ANOVA significant at level $P < .005$.

[†]NDD neurodevelopmental disorders.

adolescents obtained good support from parents and friends. Harassment was measured at the second lowest level of all the clusters.

The adolescents' participation in school activities was lower than average.

13 | CLUSTER 6

13.1 | Adolescents with good support and generally an average cluster

This cluster contained more girls and fewer adolescents with a country of origin other than Sweden.

The adolescents obtained good support from parents, teachers, and peers but less support within interpersonal relationships.

14 | CLUSTER 7

14.1 | Adolescents with most overall support

This cluster was characterised by an almost equal distribution of boys and girls. Most of the adolescents lived together with both of their parents and were born in Sweden. The adolescents had good support from parents, teachers, peers, and within interpersonal relationships; hence, it was the cluster with most support overall. The adolescents participated more than average in home activities but to a lower extent in school activities.

15 | CLUSTER 8

15.1 | Adolescents with more siblings and more adolescents with a country of origin other than Sweden

This cluster contained more boys than girls, and more of the adolescents than average had NDD and a country of origin other than Sweden. The adolescents had more siblings than average. They obtained good support from parents and within interpersonal relationships, but the support from teachers and peers was lower.

16 | CLUSTER 9

16.1 | More adolescents living with single parents with lower economic status

In this cluster, fewer adolescents had a country of origin other than Sweden, and more adolescents had siblings. The cluster was characterised by more single parents and more families with lower economic status. There was a low frequency of adolescents with NDD.

The adolescents had good support from peers but less support from parents and within interpersonal relationships.

The adolescents participated in school activities to a higher extent and experienced more harassment than average.

In summary, the results showed that adolescents with a complicated home situation with low economic prerequisites received little support from parents and peers, and they also participated at a lower level in home activities. A substantial number of the adolescents reported NDD. These adolescents were also exposed to a higher level of harassment. They participated to a higher extent in school activities, although they received little support from teachers. On the other hand, the adolescents who received most support from parents and teachers had a country of origin other than Sweden and also lived together with both of their parents and had more siblings than average. However, their participation in home and school activities was low.

17 | DISCUSSION

Adolescents with a complicated home situation received little support from parents and peers. A substantial number of these adolescents self-reported NDD and were generally more exposed to harassment. These patterns were especially evident in some clusters, for example, in Cluster 2 with more boys than girls and in Cluster 3 with more girls than boys. Girls tend to have more unmet communication needs in their families and peers than boys (Moreno et al., 2009) whereas boys have more problems in school than girls (Goldfarb, Locher, Preskitt, Becker, & Sen, 2017). With regard to adolescents with a disability, Eriksson, Welander, and Granlund (2007) found that they mostly received support in structured situations. However, these adolescents should have the same opportunities to participate in school activities as those without disabilities (Simeonsson, 2003; United Nations General Assembly, 2006). This might not always have been obtained, and the degree of support might have varied according to the situations.

The adolescents in this study perceived interpersonal relationships to be important and had support from parents, peers, and teachers. Adolescence has previously been described as a challenging period when the adolescents need to gain a clearer sense of personal and sexual identity (Christie & Viner, 2005) and need support from family and peers to help them deal with their daily life (Currie et al., 2012). A slight non-significant difference in the adolescents' interpersonal relationship was seen in the clusters containing more adolescents with NDD. Factors within the individual affect his/her possibility of participating and being involved in activities in everyday life (Imms et al., 2017). Hoza et al. (2005) and Orsmond, Shattuck, Cooper, Sterzing, and Anderson (2013) found that adolescents with NDD receive less support than other adolescents, though they may not consider this as particularly important (Falkmer, Granlund, Nilholm, & Falkmer, 2012). The result is supported by previous research stating that adolescents with NDD socialise less than typically developed adolescents, that is, they do not have as many friends. One reason may be that they

do not experience this as important and that the diagnosis implies that it is difficult for them to establish and maintain relationships (Hoza et al., 2005; Orsmond et al., 2013). This is in concordance with previous research showing that parents of adolescents with disabilities report lower levels of involvement in school situation than parents of typically developed adolescents (Coster et al., 2013).

In Cluster 4, more adolescents had NDD and were exposed to sexual harassment. Previous research has shown that adolescents with any kind of disability are almost twice as likely to be exposed to sexual harassment as typically developed adolescents (Reiter, Bryen, & Shachar, 2007; Vig & Kaminer, 2002). It may be that they are more gullible and hence easier targets. They are at higher risk of abuse, and the committers are often near relations (Reiter et al., 2007), which may as well indicate less support from near relations.

Adolescents with disabilities who attend regular school are often in need of more support and participate to a lower extent than typically developed adolescents (Eriksson et al., 2007). Clusters 3 and 4 contain more girls, and more of them participate in school activities. A previous study has shown that girls are more active than boys and have more social contacts (Gustafsson et al., 2010). However, in these clusters, the adolescents experienced and rated the importance of interpersonal relationships as very low. More adolescents with NDD were seen in these clusters, which may be related to previous studies showing that adolescents with disabilities perform fewer household tasks and need more support doing so (Ferreira do Amaral, de Franca Drummond, Coster, & Mancini, 2014). Adolescents with disabilities are also less involved in school activities (Coster et al., 2013). A concern may be that teachers do not possess adequate prerequisites to support the adolescent, which could be due to a lack of information regarding individual needs (Granlund & Roll-Pettersson, 2001).

Less participation in home activities was seen in the clusters with a higher proportion of adolescents with NDD. This result is supported by Goldfarb et al. (2017), showing a significant association between certain family activities and problems in school. This indicates a weak evidence of a protective relationship between family activities and school problems or less engagement (Goldfarb et al., 2017).

The clusters with more adolescents with NDD had lower economic status and fewer two-parent households. Environmental factors, such as higher income and health conditions, and functional factors, that is, physical impairments, developmental delays, and speech-language disorders also have shown to have a direct effect on participation, serving as mediators for participation (Anaby et al., 2014). A previous study showed that about twice as many divorces were seen in families with adolescents diagnosed with autism than families with typically developed adolescents (Hartley et al., 2010). The number may be even higher among families with adolescents with other kinds of disabilities. It is often a "burden" to live with and support these adolescents. The family set-up and situation for the disabled adolescents was also described in a previous study by Tössebro and Wendelborg (2015), showing that about 83% of young disabled children live with both their biological parents, whereas the equivalent figure for older children showed only 61% living with both

parents (Tössebro & Wendelborg, 2015). However, this study showed no significant relationship with the perceived economic status of the family.

18 | METHODOLOGICAL CONSIDERATIONS

All data were self-reported by the adolescents, and accordingly, it has not been possible to confirm the diagnoses. The independent variable interpersonal relations had a low calculated Cronbach's alpha, which arguably could be because it contained three questions and a statement, and it is about a boyfriend/girlfriend, which is highly dependent on the adolescent's maturity, and at this age, that differs greatly. The independent variable engagement in school had a low calculated Cronbach's alpha, which arguably could be because the questions were about feelings of both their own performance and whether they felt forced to go to school. The questions relate clinically.

This study is a population-based sample, which is a strength. Adolescents with self-reported NDD were few in relation to the total sample, which could be important to consider when interpreting the result.

19 | CONCLUSION

Adolescents with a complicated home situation with low economic prerequisites received little support from parents and peers and participated less in home activities. A substantial number of these adolescents self-reported NDD, and this group was more often exposed to harassment. However, these adolescents participated to a higher extent in school activities, although they received little support from teachers. The adolescents who received most support from parents and teachers had a country of origin other than Sweden and lived together with both of their parents and more siblings than average. However, this did not mean that they participated to a higher extent in home and school activities.

ACKNOWLEDGEMENTS

We would like to thank the adolescents who answered the questionnaires for contributing valuable information and their teachers who in some cases assisted them with practical support.

A major financial contribution was granted in a combined decision (No. 259-2012-25) from four Swedish research foundations: the Swedish Research Council (VR); the Swedish Research Council for Health, Working Life and Welfare (FORTE); Sweden's Innovation Agency (VINNOVA); and the Swedish Research Council Formas. Additional contributions were granted from Säfstaholm Foundation (No. ST-2014-023); Sunnerdahl Disability Foundation (No. 40-14); Futurum, Jönköping County, (No. 2014/3821-271); and FORTE (No. 2015-0058).

ORCID

Berit Møller Christensen  <https://orcid.org/0000-0002-1404-2450>

REFERENCES

- Almqvist, L., Hellnäs, P., Stefansson, M., & Granlund, M. (2006). "I can play!" Young children's perceptions of health. *Pediatric Rehabilitation, 9*(3), 275–284. <https://doi.org/10.1080/13638490500521303>
- Anaby, D., Law, M., Coster, W., Bedell, G., Khetani, M., Avery, L., & Teplicky, R. (2014). The mediating role of the environment in explaining participation of children and youth with and without disabilities across home, school, and community. *Activities of Physical Medicine and Rehabilitation, 95*, 908–917. <https://doi.org/10.1016/j.apmr.2014.01.005>
- Barkley, R. A., Fischer, M., Edelbrock, C., & Smallish, L. (1991). The adolescent outcome of hyperactive children diagnosed by research criteria-III. Mother-child interactions, family conflicts and maternal psychopathology. *Journal of Child Psychology and Psychiatry, 32*, 233–255. <https://doi.org/10.1111/j.1469-7610.1991.tb00304.x>
- Bergman, L. R. (2003). *Studying individual development in an interindividual context: A person-oriented approach*. Mahwah, N.J.: L. Erlbaum Associates.
- Brotherson, M. J., Cook, C., Erwin, E. J., & Weigel, C. J. (2008). Understanding self-determination and families of young children with disabilities in home environments. *Journal of Early Intervention, 31*(1), 22–43. <https://doi.org/10.1177/1053815108324445>
- Christie, D., & Viner, R. (2005). ABC of adolescence. Adolescent development. *BMJ, 330*, 301–304. <https://doi.org/10.1136/bmj.330.7486.301>
- Coster, W., Law, M., Bedell, G., Liljenquist, K., Kao, Y.-C., Khetani, M., & Teplicky, R. (2013). School participation, supports and barriers of students with and without disabilities. *Child: Care, Health and Development, 39*(4), 535–543.
- Currie, C., Zanotte, C., Morgan, A., Currie, D., de Looze, M., Roberts, C., ... Barnekow, V. (2012). Social determinants of health and well-being among young people. Health behavior in school-aged children (HBSC) study. International report from the 2009/2010 survey (Vol. Health Policy for Children and adolescents). Copenhagen, Denmark: WHO Regional Office of Europe.
- Eriksson, L., Welander, J., & Granlund, M. (2007). Participation in everyday school activities for children with and without disabilities. *Journal of Developmental and Physical Disabilities, 19*, 485–502. <https://doi.org/10.1007/s10882-007-9065-5>
- Falkmer, M., Granlund, M., Nilholm, C., & Falkmer, T. (2012). From my perspective - perceived participation in mainstream schools in students with autism spectrum conditions. *Developmental Neurorehabilitation, 15*(3), 191–201. <https://doi.org/10.3109/17518423.2012.671382>
- Ferreira do Amaral, M., de Franca Drummond, A., Coster, W. J., & Mancini, M. C. (2014). Household task participation of children and adolescents with cerebral palsy, Down syndrome and typical development. *Research in Developmental Disabilities, 35*, 414–422. <https://doi.org/10.1016/j.ridd.2013.11.021>
- Fridh, M., Köhler, M., Modén, B., Lindström, M., & Rosvall, M. (2018). Subjective health complaints and exposure to peer victimization among disabled and non-disabled adolescents: A population-based study in Sweden. *Scandinavian Journal of Public Health, 46*, 262–271. <https://doi.org/10.1177/1403494817705558>
- Goldfarb, S. S., Locher, J. L., Preskitt, D., Becker, S. L., & Sen, B. (2017). Associations between participation in family activities and adolescent school problems. *Child: Care, Health and Development, 43*(3), 361–368.
- Granlund, M., & Roll-Pettersson, L. (2001). The perceived needs of support of parents and classroom teachers—A comparison of needs in two microsystems. *European Journal of Special Needs Education, 16*(3), 225–244. <https://doi.org/10.1080/08856250110074382>
- Gustafsson, J. E., Allodi Westling, M., Åkerman, A., Eriksson, C., Eriksson, L., Fischbein, S., ... Persson, R. S. (2010). *School, learning and mental health: A systematic review*. Stockholm: Kungl. Vetenskapsakademien.
- Hartley, S. L., Barker, E. Y., Seltzer, M. M., Floyd, F., Greenberg, J., Orsmond, G., & Bolt, D. (2010). The relative risk and timing of divorce in families of children with an autism spectrum disorder. *Journal of Family Psychology, 24*(4), 449–457.
- Hoza, B., Mrug, S., Gerdes, A. C., Hinshaw, S. P., Bukowski, W. M., Gold, J. A., ... Arnold, L. E. (2005). What aspects of peer relationships are impaired in children with attention-deficit/hyperactivity disorder? *Journal of Consulting and Clinical Psychology, 73*, 411–423. <https://doi.org/10.1037/0022-006X.73.3.411>
- Imms, C., Geanlund, M., Wilson, P. H., Steenberger, B., Rosenbaum, P. L., & Gordon, A. M. (2017). Participation, both a means and an end: A conceptual analysis of processes and outcomes in childhood disability. *Developmental Medical Medicine & Child Neurology, 59*, 16–25. <https://doi.org/10.1111/dmcn.13237>
- Jia, Y., Ling, G., Chen, X., Ke, X., Way, N., Yoshikawa, H., ... Lu, Z. (2009). The influence of student perceptions of school climate on socioemotional and academic adjustment: A comparison of Chinese and American adolescents. *Child Development, 80*(5), 1514–1530. <https://doi.org/10.1111/j.1467-8624.2009.01348.x>
- Lyngegård, F. (2018). Participation in and outside school: Self-ratings by Swedish adolescents with and without impairments and long-term health conditions. Jönköping University, Doctoral thesis.
- Moreno, C., Sanchez-Queija, I., Munoz-Tinoco, V., de Matos, G., Dallago, L., Ter Bogt, T., ... Rivera, F. (2009). Cross-national associations between parent and peer communication and psychological complaints. *International Journal of Public Health, 54*, 235–242. <https://doi.org/10.1007/s00038-009-5415-7>
- Orsmond, G. I., Shattuck, P. T., Cooper, B. P., Sterzing, P. R., & Anderson, K. A. (2013). Social participation among young adults with an autism spectrum disorder. *Journal of Autism and Developmental Disorders, 43*(11), 2710–2719. <https://doi.org/10.1007/s10803-013-1833-8>
- Reiter, S., Bryen, D. N., & Shachar, I. (2007). Adolescents with intellectual disabilities as victims of abuse. *Journal of Intellectual Disabilities, 11*(4), 371–387. <https://doi.org/10.1177/1744629507084602>
- Shattuck, P. T., Orsmond, G. I., Wagner, M., & Cooper, B. P. (2011). Participation in social activities among adolescents with an autism spectrum disorder. *PLoS ONE, 6*(11), e27176. <https://doi.org/10.1371/journal.pone.0027176>
- Simeonsson, R. J. (2003). Classification of communication disabilities in children; contribution of the International Classification on Functioning, Disability and Health. *International Journal of Audiology, 42*(1), 2–8.
- Sorhagen, N. S., & Wurster, T. J. (2017). Income within context: Relative income matters for adolescent social satisfaction and mental health. *Journal of Child Psychology and Psychiatry, 58*, 736–743. <https://doi.org/10.1111/jcpp.12695>
- Tössebro, J., & Wendelborg, C. (2015). Marriage, separation and beyond: A longitudinal study of families of children with intellectual and developmental disabilities in a Norwegian context. *Journal of Applied Research in Intellectual Disabilities, 30*, 121–132.
- United Nations General Assembly. (2006). *Convention on the rights of the child*. New York: United Nations.

- Vig, S., & Kaminer, R. (2002). Measurement and developmental disabilities in children. *Journal of Developmental and Physical Disabilities*, 14, 371–386. <https://doi.org/10.1023/A:1020334903216>
- Zambom, A., Morgan, A., Vereecken, C., Colombini, S., Boyce, W., Mazur, J., ... Cavallo, F. (2010). The contribution of club participation to adolescent health: Evidence from six countries. *Journal of Epidemiology & Community Health*, 64(1), 89–95. <https://doi.org/10.1136/jech.2009.088443>

How to cite this article: Møller Christensen B, Björk M, Almqvist L, Huus K. Patterns of support to adolescents related to disability, family situation, harassment, and economy. *Child Care Health Dev.* 2019;1–10. <https://doi.org/10.1111/cch.12675>