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ORIGINAL ARTICLE

School is (not) calling: the associations of gender, family affluence, disruptions in the social context and learning difficulties with school satisfaction among adolescents in Slovakia

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Abstract

Objectives Education is an important tool to reduce health inequalities. Several factors influence the educational trajectory of children, with school satisfaction being one of them. The aim was to explore how learning difficulties, a disrupted social context and family affluence relate to school satisfaction.

Methods We used data from the 2018 Slovak cross-sectional Health Behaviour in School-aged Children-study (age 15 years; $N = 913$; 50.3% boys). School satisfaction was categorized as liking school and caring about education (satisfied), disliking school but caring about education or vice versa (inconsistent), and disliking school and not caring about education (indifferent). We explored the association of learning difficulties, disrupted social context and family affluence with school satisfaction using multinomial logistic regression.

Results Boys, and children having learning difficulties, or disruption in the social context and living in low affluence family were significantly less likely to be satisfied at school.

Conclusions The key is to create a stimulating and encouraging environment at school, where children successfully learn functional literacy and feel well. The more satisfaction pupils get from school, the more likely is a favourable educational trajectory for them.

Keywords Learning difficulties · Disrupted social context · Family affluence · School satisfaction · Adolescents · HBSC · Slovakia

Introduction

Education can be a powerful engine for greater equality (Walker et al. 2019), making low education a major indicator for low socioeconomic status (SES). Persons who lack education are less likely to have a generous income and use to be deprived also in all sorts of other dimensions

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of well-being, including health, among others (Curtis 2018). Several factors influence the educational trajectory of children. School satisfaction in terms of liking school and the attitude towards education is probably one of them (OECD 2013; Gorard et al. 2012). We built our study on two theories. First, the theory of health determinants (Dahlgren and Whitehead 1991) postulates that not just constitutional factors and individual lifestyle, but also social and community networks, and socioeconomic, cultural and environmental conditions impact health. Second, we built on the theory of health inequalities (Marmot 2010) arguing that inequalities in health arise because of inequalities in society—in the conditions in which people are born, grow, live, work, and age and taking action to reduce health inequalities does not require a separate health agenda, but action across the whole of society. Based on above mentioned, we believe that education is directly linked to the health and that it is necessary to investigate the factors influencing the education trajectory of children as this might have a significant impact on their health.

School satisfaction is generally defined as a cognitive-affective evaluation of overall satisfaction with school life experience (Wong and Siu 2017) which has a key role in children's quality of life (Huebner et al. 2001). There is, however, inconsistency in terminology describing the concept of school satisfaction in the literature (Libbey 2004). While previous research measured school satisfaction mostly in terms of liking school (Wong and Siu 2017), attitude towards education might also play a role (Gorard et al. 2012). Moreover, a recent Health Behaviour in School-aged Children (HBSC) report shows that a very low and decreasing proportion of children likes school, but a high proportion of children cares about education (Bosakova and Boberova 2019). This group of children who cares about education but do not like school might be overlooked if not looking to the composite of both variables. Therefore, research on school satisfaction may benefit from using a composite variable that enables to include the inconsistency in attitudes towards school and towards education.

School satisfaction highly depends, on top of the personal capacities, on the context in which the child is raised, including family and school. Although personal capacities, including IQ, mental health and neurodevelopmental disorders are mostly gene-based, research also revealed that non-genetic contextual factors could have a major impact on them (Cassen et al. 2008) and consequently to school satisfaction of children. The family forms the environment in which a child develops by adopting social behaviour and its first attitudes. It provides the child with opportunities to develop into a stable and independent person, for example through enabling the child to attend school (de Lange et al. 2014). A variety of social disadvantages (deprived family backgrounds, stressful experiences, etc.) may contribute to poor educational outcomes (Cassen et al. 2008), with low SES (Lam 2014; Farooq et al. 2011) and adverse childhood experiences (ACE) (Blodgett and Lanigan 2018) being examined most often.

Less attention has been paid to a disrupted social context, i.e. experiences when children do not have fixed sources (e.g. parents, peers, teachers) or have disrupted sources that they need to acquire cultural capital. Children are in the process of acquiring their embodied cultural capital over time (Bourdieu and Passeron 1990). This could be disrupted, for example, by moving to another city or school, when children lose their contacts and support resources, what might affect their school satisfaction (Jelleyman and Spencer 2007). Another example could be the separation from a parent due to work abroad, when the remaining parent has only limited capacity to support child in learning and education (Giannelli and Mangiavacchi 2010), with increased probability of dropping out of school or delayed school progression but also reduced incentives for education when perceived future returns to education are low because of expectations of migration (Démurger 2015). Social context is related to the incorporated cultural capital (Bourdieu and Passeron 1990), comprising skills and knowledge for everyday practice acquired by all forms of learning, also beyond schooling. These have a crucial impact on the objectivized and institutionalized cultural capital. Thus, disruption of the social context might disturb the process of acquiring the incorporated cultural capital which next may have a negative impact on school satisfaction.

School is another contextual factor affecting school satisfaction. It can provide children with positive or negative experiences that may vary by gender. Boys seem to like school less than girls do and need help with homework from parents more often. Girls seem to report better school performance than boys do. Boys, however, seem to perceive less stress at school than girls do (Bosakova and Boberova 2019). The most commonly examined school factors in connection with school satisfaction have been relationships with classmates and teachers (Tian et al. 2016; Danielsen et al. 2010), academic performance (Hui and Sun 2010) and school stress (Lovenjak and Peklaj 2016). We, however, believe that also learning difficulties, for children often associated with failure and lack of fulfilment (Konu and Rimpelä 2002), may have significant impact on school satisfaction. By learning difficulties, we mean self-reported difficulties with reading, writing and counting, i.e. with the basic literacy skills (Paakkari et al. 2018) not necessarily diagnosed or requiring special education needs (as is in case of learning disabilities). The evidence is, however, much scarcer on this topic, especially

regarding self-reported learning difficulties and the context of school satisfaction.

The Slovak educational system has a rather specific structure, with relatively poor educational outcomes, and low public investments. Compulsory education starts at the age of 6 and lasts 9 or 10 years, or until the student has reached the age of 16. It consists of primary school organized as a single structure, with a first stage (4 years) and a second stage (5 years). After that, students can proceed to secondary education (Herbst and Wojciuk 2014). Regarding educational outcomes, early school-leaving rate has increased since 2010, now being as high as 14.0% in Eastern Slovakia. Investments in education and training are low, what is reflected in teachers' still low salaries despite recent increases (European Union 2019). Over the past decade, the proportion of the Slovak population with an educational attainment of below upper secondary education has fallen from 16.0 to 14.5% and the proportion with tertiary education has grown from 10.0 to 23.1% (OECD 2014; Eurostat 2020a). Regarding other social determinants, the unemployment rate in Slovakia is currently 5.8% and poverty rate 7.3% ranking the country at the top 10 OECD countries with the lowest poverty rate levels (Eurostat 2020b; OECD 2020).

Slovakia has a rather challenging setting to assess the process leading to poor school success as it faces very serious challenges regarding its education system (Schraad-Tischler 2015). The country has the highest unemployment rate related to a lower educational attainment among the EU countries (Eurostat 2020a, b). Slovakia still ranks high among countries regarding the impact of the socioeconomic background of children on their school performance (OECD 2019). Slovak children have significant difficulties with reading, writing, and counting (OECD 2019; Bosakova and Boberova 2019). Moreover, only one in five Slovak children likes school and over one-third does not care about their education (Bosakova and Boberova 2019). In addition, Slovakia belongs, together with Czech Republic, Hungary and Poland, to the EU countries in which a low education level is the most significant predictor of mortality (Bosakova et al. 2019).

In order to help especially the most vulnerable children, it is necessary to understand which factors can contribute to or threaten their school satisfaction as a key to their further educational success. Therefore, the aim of this article is to explore how gender, family affluence, disruption of the social context and learning difficulties contribute to school satisfaction in Slovakia.

Methods

Sample and procedure

We used data from the HBSC study conducted in 2018 in Slovakia. This regards a population-representative sample based on a two-step sampling. In the first step, 140 larger and smaller elementary schools located in rural and urban areas from all regions of Slovakia were asked to participate. These were randomly selected from a list of all eligible schools in Slovakia obtained from the Slovak Institute of Information and Prognosis for Education. In the end, 109 schools agreed to participate in our survey. School response rate (RR) was 77.85%. In the second step, we obtained data from 8405 adolescents from the fifth to ninth grades of these elementary schools, aged 11–15 years old (mean age 13.43; 50.9% boys). In this study, we used data from 15-year-old adolescents ($N = 1127$) who answered questions connected to the attitude towards education. Moreover, respondents with missing responses were excluded ($N = 214$) leading to a final sample of 913 adolescents (50.3% boys). Excluded versus included respondents did not differ (χ^2) in school satisfaction, but differed in gender ($p < 0.001$) and FAS ($p < 0.05$). More boys (63.1% vs. 50.3%) and more pupils with low FAS (51.5% vs. 33.6%) were excluded due to missing data.

The study was approved by the Ethics Committee of the Medical Faculty at the P.J. Safarik University in Kosice (16N/2107). Parents were informed about the study via the school administration and could opt out if they disagreed with their child's participation. Children were informed about the study in advance by their teachers and at the time of data collection by the HBSC administrator, explaining also the option to refuse to participate. Participation in the study was fully voluntary and anonymous with no explicit incentives provided for participation.

Measures

School satisfaction Respondents were asked how they feel about school at present, with four-point Likert-type responses (I like it a lot, I like it a bit, I don't like it very much, I don't like it at all). We dichotomized this item, following the HBSC protocol (Inchley et al. 2018), into two categories: (1) adolescents who like the school a lot, (2) the adolescents who do not like the school. We further asked children if they care about the kind of education they will have, with three-point Likert-type responses (I care a lot, I care about it, but not too much, I could not care less). We dichotomized this as: (1) adolescents who care about their education a lot, (2) the adolescents who do not care about their education. Next, a composite variable school

satisfaction was created with three groups of adolescents: (1) indifferent—adolescents who do not like school and do not care about their education; (2) inconsistent—adolescents who do not like school and care about their education or adolescents who like school and do not care about their education; and (3) satisfied—adolescents who like school and care about their education.

Learning difficulties Respondents were asked if they have had difficulties in reading, writing or counting. If they reported some or clear difficulties in any of these three areas, we considered them to have difficulties; otherwise, we considered them to not having difficulties. By learning difficulties, we mean self-reported difficulties with reading, writing and counting, i.e. with the basic literacy skills (Paakkari et al. 2018) not necessarily diagnosed or requiring special education needs (as is in case of learning disabilities).

Social context Respondents were asked if they had ever experienced: separation of their parents due to work abroad; moving to another house/flat or city/village; or transfer to another school. If they reported any of these serious events, we considered them to have a disrupted social context; otherwise, we considered them to have an intact social context.

Family affluence as a measure for SES was assessed using the Family Affluence Scale III (FAS-III), which consists of six questions: "Does your family own a car, van or truck?" (No/Yes, one/Yes, two or more), "Do you have your own bedroom for yourself?" (Yes/No), "How many computers does your family own?" (None/One/Two/More than two), "How many bathrooms (room with a bath/shower or both) are in your home?" (None/One/Two/More than two), "Does your family have a dishwasher at home?" (Yes/No), "How many times did you and your family travel out of your country for a holiday/vacation last year?" (Not at all/Once/Twice/More than twice). We computed the sum score, which we converted to a score ranging from 0 to 1. We then created tertile categories of low (0–0.333), medium (0.334–0.666) and high (0.667–1) socio-economic position (Elgar et al. 2015). Further information regarding FAS is provided in the HBSC protocol (Inchley et al. 2018).

Statistical analysis

First, we described the background characteristic of our sample according to gender, learning difficulties, disrupted social context, family affluence and school satisfaction. Next, we explored the contribution of learning difficulties, disruption of the social context and family affluence to school satisfaction using multinomial logistic regression. We accounted in these analyses for the clustering (i.e. that students from the same school may be more similar than students from different schools). All analyses were performed using IBM SPSS Statistics 21 for Windows (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.).

Results

Background of the sample

Table 1 shows the background descriptive characteristics of the sample according to gender, reported learning difficulties, disrupted social context, family affluence and school satisfaction. The distribution of each item from composite variables, including across categories of school satisfaction, can be found in online resource ESM 1. Almost two-thirds of 15-year-old Slovak school-aged children reported learning difficulties, and more than half of them reported a disrupted social context. One-third of the children reported low family affluence. Almost one-third of the children reported to dislike school and to not care about education (indifferent), and more than half disliked school but cared about education, or vice versa (inconsistent). Only 11.5% reported to like school and care about education (satisfied).

Table 1 Descriptive statistics of the sample (Slovakia 2018, 15 years old, $N = 913$)

Characteristic	*N* (%)
Gender	
Boys	459 (50.3)
Girls	454 (49.7)
Family affluence (SES)	
Low	307 (33.6)
Middle	265 (29.0)
High	341 (37.3)
Disrupted social context	
Intact social context	423 (46.3)
Disrupted social context	490 (53.7)
Learning difficulties	
Not having learning difficulties	308 (33.7)
Having learning difficulties	605 (66.3)
School satisfaction	
Indifferent	266 (29.1)
Inconsistent	542 (59.4)
Satisfied	105 (11.5)

Contribution of learning difficulties, disruption in social context and family affluence to school satisfaction

The multinomial logistic regression showed that boys, compared to girls, were more likely to be indifferent (dislike school and not care about education) than satisfied (like school and care about education) (Table 2, model 1). Children who had learning difficulties, compared to children without learning difficulties, were more likely to be inconsistent (dislike school but care about education and vice versa) than satisfied and to be indifferent than satisfied. Children with a disrupted social context, compared to children without a disrupted social context, were more likely to be inconsistent than satisfied and to be indifferent than satisfied. Children with low family affluence were, compared to children with high family affluence, more likely to be indifferent than satisfied.

In Model 2, boys, compared to girls, were more likely to be indifferent than inconsistent. Children with learning difficulties, compared to children without learning difficulties, were more likely to be indifferent than inconsistent. Children with low family affluence were, compared to children with high family affluence, more likely to be indifferent than inconsistent (Table 2).

Discussion

The aim of this article was to explore how gender, family affluence, disruption in the social context and learning difficulties contribute to school satisfaction in Slovakia. We found that boys, compared to girls, were more likely to be indifferent than satisfied and to be indifferent than inconsistent. We further found that children who reported learning difficulties, compared to children without learning difficulties, were more likely to be inconsistent than satisfied, to be indifferent than satisfied, and to be indifferent than inconsistent. In addition, children with a disrupted social context were, compared to children with a continuous social context, more likely to be inconsistent than satisfied and to be indifferent than satisfied. Finally, children with low family affluence were, compared to children with high family affluence, more likely to be indifferent than satisfied, and to be indifferent than inconsistent.

We found that boys were significantly less satisfied at school, thus less liked school and cared about education. Boys seems to be more vulnerable, as regards school. Research showed that boys' culture is less study oriented than girls' culture (Van Houtte 2010), with boys less motivated than girls and having less positive attitudes towards school (Francis 2000), resulting in worse school

Table 2 The association between school satisfaction, learning difficulties, disrupted social context and family affluence (as a measure for SES) from multinomial logistic regression (Slovakia 2018, 15 years old, $N = 913$)

	School satisfaction		
	Model 1		Model 2
	Inconsistent versus satisfied OR (95% CI)	Indifferent versus satisfied OR (95% CI)	Indifferent versus inconsistent OR (95% CI)
Gender			
Boys	1.22 (0.77–1.94)	1.98 (1.18–3.35)**	1.63 (1.18–2.23)**
Girls	Ref	Ref	Ref
Family affluence (SES)			
Low	1.02 (0.59–1.78)	1.82 (1.00–3.30)*	1.78 (1.28–2.47)**
Middle	0.84 (0.50–1.42)	1.08 (0.60–1.96)	1.28 (0.91–1.80)
High	Ref.	Ref.	Ref.
Disrupted social context			
Disrupted social context	1.77 (1.19–2.63)*	2.35 (1.50–3.67)***	1.32 (0.99–1.76)
Intact social context	Ref.	Ref.	Ref.
Learning difficulties			
Having learning difficulties	1.84 (1.21–2.79)*	2.63 (1.59–4.35)***	1.43 (1.02–2.02)*
Not having learning difficulties	Ref.	Ref.	Ref.

Model 1 The reference category is satisfied (like school and care about education)

Model 2 The reference category is inconsistent (do not like school but care about education)

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; overall χ^2 value for model improvement (models 1 and 2): 60.5 on 10 degrees of freedom, $p < 0.0001$

We did not report separately the category satisfied versus inconsistent in Model 2, as it is reverse of the findings presented in the first column of this table

performance in boys than in girls (Farooq et al. 2011). Boys need more encouragement, in order to develop their inner motivation (Van Houtte 2010), especially by significant adults (Blyth et al. 1982), what could help to build their value of education and thus of school satisfaction. Based on our findings, this could be the case in Central Europe too.

We found also that children with low family affluence were, compared to children with high family affluence, more likely to dislike school and do not care about education. This confirms previous research showing that the relationship between childreńs socioeconomic background and their educational achievement is substantial. Children from low socioeconomic level homes are at a disadvantage in schools because they lack an academic home environment, which influences their academic success at school (Thomson 2018). Parents with higher SES are able to provide their children with financial support and home resources for individual learning and also more likely to provide a more stimulating home environment that promote cognitive development and psychological support for their children necessary for success at school (Thomson 2018; Evans et al. 2010). Families with high affluence are more likely to show the value of education in their children than low affluence families. School can support the more vulnerable child by collaborating with the families of these children, to be able to reinforce childreńs inner motivation first and to encourage them, to use active teaching methods, to explain the practical use of the curriculum, etc. (Čokyna 2019; Farrington et al. 2012).

We also found that adolescents with a disrupted social context were significantly less likely to be satisfied at school, thus to like school and care about education. Our findings support previous research suggesting negative effect of residential mobility (Voight et al. 2012) and parents work abroad (Giannelli and Mangiavacchi 2010) on childreńs success at school. The community surrounding children has a rather large impact on them, which should not be underestimated (Konu and Rimpelä 2002). Wider social capital was also found to be a protective factor in impact of income, housing or parenting on the childreńs school attainment (Cassen et al. 2008). Events such as moving to another neighbourhood or transfer to another school, however, may be experienced as stressors that demand for adaptation (Jackson and Waren 2000) and may cause a social context disruption (Jelleyman and Spencer 2007). Also, the separation from a parent due to work abroad may disrupt childreńs social context (Cassen et al. 2008; Giannelli and Mangiavacchi 2010), and may limit the capacity for child support regarding learning and education by the remaining parent (Giannelli and Mangiavacchi 2010).

We found that learning difficulties decreases significantly the likelihood to be satisfied at school. This finding is in accordance with previous research showing that learning difficulties are major contributors to childreńs school life satisfaction (Wong and Siu 2017) and with research suggesting that successful learning experiences are crucial for school satisfaction (Hui and Sun 2010). We also found that almost two-thirds of 15-year-old Slovak school-aged children reported learning difficulties. We believe these difficulties started probably much earlier, at the beginning of the schooling. However, consequences of it in terms of school dissatisfaction persist till adolescence. There might be several explanations for this, such as inappropriate approaches in teaching of writing, reading and counting; insufficient screening of problems with establishing these elementary skills; an absence of measures applied to support children struggling with these problems; or neglect of the problems by the family (due to stigma, trivialization or misunderstanding of the severity of the problem). Learning difficulties might be for children associated with failure and lack of fulfilment (Konu and Rimpelä 2002) what can increase the risk of giving up. Learning difficulties are also most likely reflected in a poor academic performance, which also belong to the factors influencing school satisfaction (Hui and Sun 2010). It seems the way, how children are taught at present does not fit to their needs resulting in difficulties with functional literacy, inevitable for further learning. Educational and didactic approaches in very beginning of schooling should be assessed, as well as early diagnosis considered, in order to equip children better for successful educational trajectory. Currently, the support for such children mainly depends on the care that parents organize outside school and Slovak schools provide rather limited support to such children (Hall et al. 2019). This gap evidently deserves further attention.

School success goes hand in hand with school satisfaction and school satisfaction goes across the liking school and valuing education. On top of personal capacities, school satisfaction also highly depends on the family and school context, in which the child is raised. If the school keeps children engaged, it increases chances for closing educational gaps. The challenge is to stimulate cultural capital transmission. Regarding school satisfaction, there are several groups that are more vulnerable, such as boys, children from low affluence families, children with learning difficulties and with disrupted social context. It is necessary for school to provide preventive and responsive care at schools to ensure such an environment where children feel good and are successful, being able to receive at least basic functional literacy.

Strengths and limitations

A strength of our study regards the large and nationally representative sample of 15-year-old adolescents. Regarding limitations, we did not measure the synergic effect of gender, learning difficulties, disrupted social context, family affluence and school satisfaction. Also, our use of self-reported questionnaires might lead to some information bias, but we minimized this by use of validated questionnaires and filling in these in a restricted setting. Another limitation regards the cross-sectional design of this study, which does not allow us to make conclusions about causality. Finally, more boys and respondents from low affluence families were excluded due to missing data, what might result in selection bias. Also, lack of other control variables might be seen as a limitation of this study. Some of the differences that we found may in fact reflect the impact of other characteristics such as ethnicity, region or urbanization. This definitely requires further study.

Implications

The results of our study have implications for improving school environment, in terms of creating a stimulating and encouraging environment, where children successfully learn functional literacy and feel well. In addition, educational and didactic approaches in very beginning of schooling should be assessed in order to equip children better for successful educational trajectory. Future research should also asses the role of other characteristics, such as ethnicity, region or urbanization. Also, the risks of intact social context for school satisfaction, such as mental illness, family violence and abuse should be considered in future research. Future research should also aim to explore the association between perceived teacher support and classmate support and school satisfaction. Furthermore, measuring the synergic effect of gender, learning difficulties, disrupted social context, family affluence and school satisfaction would unravel better the size of this effect. In addition, a comparison of this school satisfaction to the countries with better and worse school performance might help to design better interventions in this area.

Conclusion

School plays an important role in the lives of children. There are some children at the school, with backgrounds and increased vulnerabilities that might negatively affect their school satisfaction and have an impact on their further educational trajectory. This regards children with learning difficulties, children from a disrupted social context and from low affluence families, with boys being more vulnerable than girls. However, by creating a stimulating and encouraging environment at school, where children successfully learn functional literacy and feel well, also, sense of educational value might be built. The more satisfaction pupils get from school, the more school goals (i.e. educational targets) are achieved.

Authors' contribution LB and AMG participated in the design of the study, analysed the data, interpreted results and drafted the manuscript. JPD and SAR helped substantially with the design of the study, drafted the manuscript and helped with the interpretation of the results. All authors read and approved the final manuscript.

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Availability of data and materials The datasets generated and/or analysed during the current study are not publicly available.

Compliance with ethical standards

Conflict of interest All authors declare that they have no conflict of interest.

Ethics approval and consent to participate The study was approved by the Ethics Committee of the Medical faculty at Safarik University in Kosice under no. 16N/2017 and is in accordance with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

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