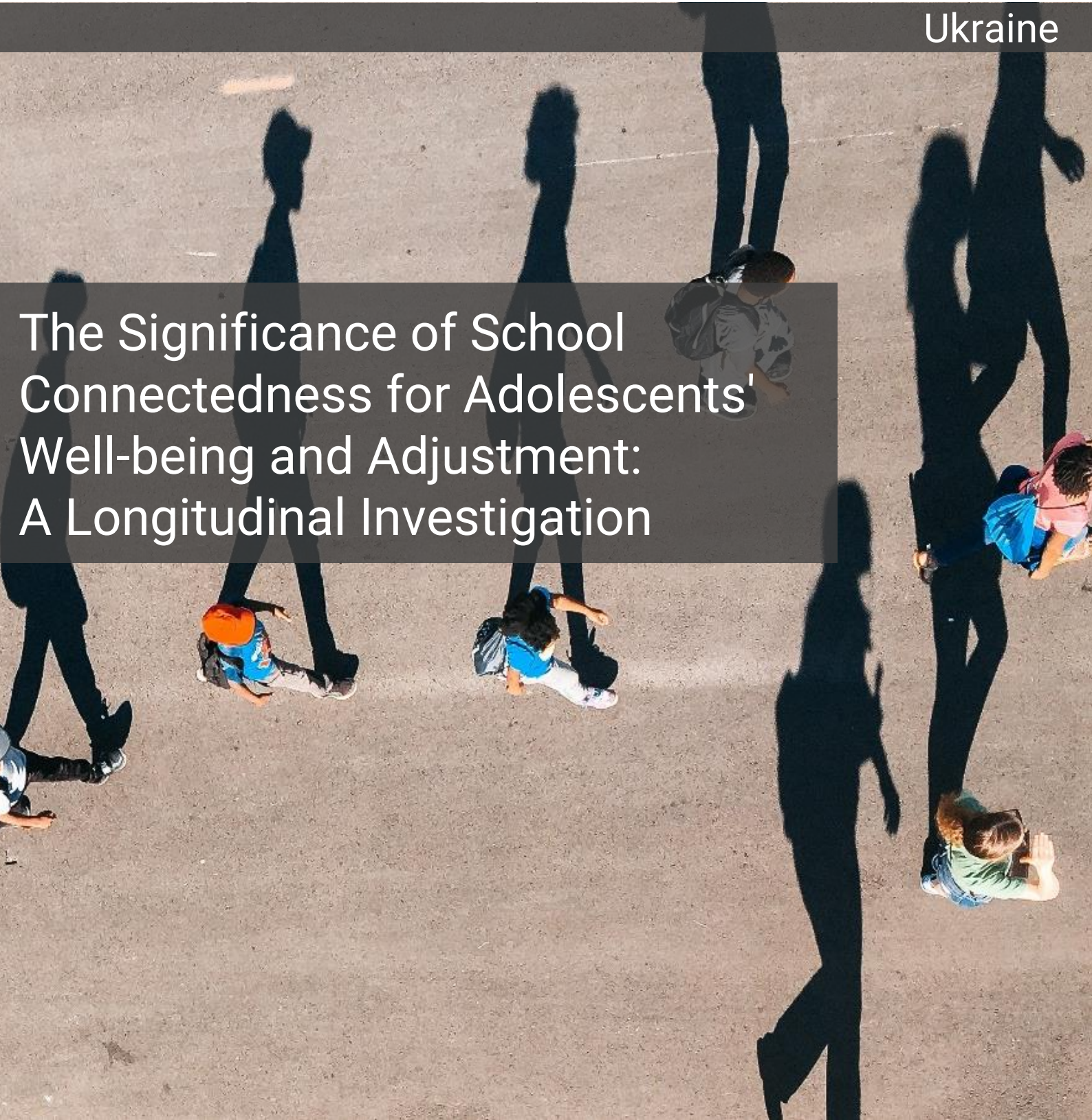




MOVING FORWARD
TOGETHER



Ukraine



The Significance of School
Connectedness for Adolescents'
Well-being and Adjustment:
A Longitudinal Investigation

Acknowledgement

Authors

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Acronyms and abbreviations

ESPAD	European School Survey Project on Alcohol and Other Drugs
GCA	Government-Controlled Areas
NGCA	Non-Government-Controlled Areas
HBSC	Health and Behaviour in School-aged Children
MoES	Ministry of Education and Science
ODD	Oppositional Defiant Disorder
PTSD	Post-Traumatic Stress Disorder
SC	School Connectedness
SCORE	Social Cohesion and Reconciliation Index
SeeD	Centre for Sustainable Peace and Democratic Development
SEM	Structural Equation Model
UISR	Ukrainian Institute for Social Research after Oleksandr Yaremenko
UNICEF	United Nations Children's Fund
USE	United Nations Social Cohesion and Reconciliation Index for Eastern Ukraine
WHO	World Health Organization

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Key terms and Definitions

Adolescents: the term adolescents in UNICEF is used for young people aged 10 to 18 years. However, the adolescents that participated in the longitudinal study were aged between 14 and 19.

Areas near the contact line: defined as areas within 15 kilometres of the contact line in the government-controlled areas of Donetsk and Luhansk oblasts. Oblasts are administrative units within Ukraine.

Externalising problems: outward behaviours that have a negative impact for the individual and the society, such as oppositional defiance and aggression.

Internalising problems: internalising problems are defined in this study as anxiety, depression, and post-traumatic stress disorders (PTSD).

Life Skills: UNICEF defines Life skills as psychosocial abilities for adaptive and positive behaviour that enables individuals to deal effectively with the demands and challenges of everyday life.

School Connectedness: In this study, the concept includes a sense of emotional connection to school and support from peers and teachers.

School policies: are defined as established expectations of how a school should operate. School policies are measures which help with the day-to-day functioning of the school, as well as in creating a safer school environment.

1. Executive Summary

The main aim of the present study is to explore the longitudinal significance of school connectedness. Specifically, the current study investigates both the importance of school connectedness for adolescents' well-being and adjustment, as well as the long-term determinants of school connectedness. To explore these aims, the Centre for Sustainable Peace and Democratic Development (SeeD) in collaboration with the United Nations Children's Fund (UNICEF) implemented a large-scale quantitative study across eight oblasts in Ukraine. The current report is based on longitudinal data which were gathered across two time points – the first set of data was collected in 2018, and the second one in 2019. Two thousand and forty-five ($N = 2,045$) adolescent students took part in the study at both time-points. They were recruited from 200 educational institutions in 8 oblasts in Ukraine: Dnipropetrovsk, Zaporizhzhia, Kharkiv, Mykolaiv, Lviv, Kyiv, and the government-controlled areas of Donetsk and Luhansk oblasts.

The study first investigates the levels of school connectedness and found that, across Ukraine, adolescents experience lower levels of teacher support and higher levels of peer support. This finding indicates that prevention and intervention programmes aimed at enhancing teacher support should constitute a nationwide priority.

Then, the study sought to explore how differences in levels of school connectedness have an impact on adolescent developmental outcomes. Specifically, five different profiles of adolescents based on their levels of school connectedness were identified; (i) adolescents who experienced high levels of school connectedness at both time-points; (ii) adolescents whose experiences of school connectedness increased in the span of one year; (iii) adolescents whose experiences of school connectedness decreased in the span of one year; (iv) adolescents who experienced average levels of school connectedness at both time-points, and (v) adolescents who experienced low in school connectedness in both years. Interestingly, our findings show how essential long-term positive school experiences are for adolescents' development. In other words, adolescents who experienced high levels of school connectedness in both years had the highest quality of life and life satisfaction, and enhanced academic performance¹. Similarly, life skills show an increasing trend, as do familial experiences and how positively students perceive their school's environment. All in all, our findings support the idea of "more is better", and this has important policy implications as the findings suggest that schools should work towards nurturing *long-term* connectedness. Further analyses on the importance of school connectedness, indicate that connected adolescents are more likely to have increased quality of life and life skills in the future. For instance, school connectedness increases adolescents' future self-management skills, decision-making skills, cooperation skills, and respect for diversity. Likewise, school connectedness is predictive of higher academic adjustment, as indicated through the enhanced academic performance and reduced tendency to consider early school leaving.

The study also identifies a number of factors that contribute to experiences of school connectedness in the long-term. Identifying the factors that enhance or diminish school connectedness is an important first step towards the design of effective prevention and intervention programmes. The current study found, for instance, that self-management skills are predictive of higher levels of school connectedness. Furthermore, adolescents with warm and involved parents experience higher connectedness in the future. Since home and school are considered two of the most important microsystems both for children and adolescents, the current findings support the longstanding view that what happens at home transfers to the school environment. Other key determinants of school connectedness include previous experiences of connectedness, academic

¹ In this study, academic performance is self-reported by adolescents and is understood as a proxy measure for actual performance.

performance, and quality of life, whereas externalising behaviours (e.g. conduct disorder, oppositional defiance disorder, and aggression) and internalising behaviours (e.g. anxiety and depression) diminish experiences of connectedness.

Relevant to the experiences within the school environment, the present report also investigates how a set of different factors have an impact on school dropout tendency. Due to the fact that actual school dropout is linked to an array of future challenges, such as unemployment, single parenthood, early parenthood, exploring about this phenomenon is essential. Analyses demonstrated that connected adolescents are less likely to want to drop out of school. Likewise, involved parents who monitor their child's behaviours is an essential prerequisite for adolescents' willingness to continuing their studies. In contrast, bullying and victimisation experiences, and externalising behaviours all predict young people's likelihood to consider early school dropout. Understanding the mechanisms through which school dropout can be lessened is crucial because then, stakeholders and school experts are better able to design effective programmatic interventions.

2. Introduction

2.1. Background: the need for school connectedness

Adolescence is a critical period in one's life. It is acknowledged that adolescence is a distinct phase of life, where numerous physical, cognitive, and behavioural changes take place, preparing the young person for the impending adulthood. Yet, adolescence is also a time of "storm and stress"², where young people experience an inevitable turmoil. Furthermore, adolescence marks the transition from childhood to adulthood; and from irresponsibility and immaturity to having to be both responsible and mature. For this reason, societies need to invest in young people, to ensure that they become well-adjusted and productive adults. They need care and warmth from their parents and other significant adults. They need safe and high-quality education systems that will help them flourish and reach their full potential. And they need positive social environments that will provide for their safety, social engagement, and community cohesion. Failure to do so brings about behavioural and psychosocial challenges. For example, in Ukraine, the unresolved armed conflict in the eastern part of the country negatively impacts many children and young people, especially those living near the contact line, which is the 500 kilometres demarcation point between government-controlled and non-government-controlled areas. Empirical evidence shows that exposure to conflict increases behaviour problems (e.g. delinquency, substance use, and risky sexual behaviour), internalising problems (e.g. anxiety, depression, and self-harm), and an overall reduction in well-being³. These findings are important because, in turn, behaviour problems impair academic performance and adolescents' willingness for non-violent civic participation, while they increase bullying behaviours and tendencies to consider early school leaving. Similarly, internalising behaviours increase the likelihood of self-harm and suicidality².

Schools constitute an important microsystem for children and adolescents. It educates students and helps them socialise and learn the social rules of underlying friendships and other relationships. The present report focuses explicitly on how School Connectedness impacts adolescent development. Similar to the family system, adolescents form consistent, direct, and close intimate relationships with their peers and their school teachers. Thus, those relations are very influential for the young person. As a concept, School Connectedness – defined as "the belief by students that adults and peers in the school care about their learning as well as about them as individuals"⁴ – can help adolescents positively adjust to their social environments. School connectedness is a multidimensional construct that consists of peer support, teacher support, and emotional connection to the school. Specifically, peer support is about the connection adolescents have with their peers and the degree to which they receive the comfort and support they need from them. On the other hand, teacher support refers to the quality of students' relations with their teachers, as well as adolescents' perceptions of the amount of care, concern, and encouragement their teacher directs toward them. Lastly, adolescents who experience an emotional connection to their school experience a strong bond and are emotionally invested in their schools.

Longitudinal studies show that school connectedness comes out as an essential determinant of adolescents' behaviours both inside and outside the classroom. For instance, in a longitudinal study which explored students' perceptions of school connectedness and their academic outcomes across the first year of middle school, students who reported less decline in school support across

² Hall, G. S. (1904). *Adolescence: In psychology and its relation to physiology, anthropology, sociology, sex, crime, religion, and education* (Vol. I & II). Englewood Cliffs, NJ: Prentice-Hall.

³ Lordos, A., Morin, H., Fanti, K., Lemishka, O., Guest, A., Symeou, M., Kontoulis, M., and Hadjimina, E. (2019) "An evidence-based analysis of the psychosocial adaptability of conflict-exposed adolescents and the role of the education system as a protective environment", Ukraine: United Nations Children's Fund (UNICEF).

⁴ Centers for Disease Control and Prevention. (2009). *School Connectedness: Strategies for Increasing Protective Factors Among Youth*. Atlanta: U.S. Department of Health and Human Services.

the year earned higher grades than students who reported greater declines in school support⁵. Likewise, there is empirical evidence that in intervention programmes that aim to increase protective factors, school bonding contributed positively in academic performance and social competence, and negatively with alcohol and drug use, criminal involvement, and school dropout⁶. Importantly, these positive outcomes were also present in participants six and nine years after the intervention was completed⁵. All in all, perceived school connectedness protects adolescents against health risk behaviours in the long term, such as, among others, emotional distress, suicidal ideation and suicidal-related behaviours, violence, and age of sexual debut⁷, and is linked to adolescents' future orientation two years later⁸. All things considered, school connectedness is important for promoting long-lasting and healthy development in adolescents.

In Ukraine, school connectedness was explored in 2017 and 2018, in studies conducted by the Centre for Sustainable Peace and Democratic Development (SeeD) in collaboration with UNICEF. In 2017, a large-scale study was conducted in eastern Ukraine, where 3,311 adolescent students from the government-controlled areas (GCA) of the Donetsk and Luhansk oblasts participated. Likewise, to explore the unique contribution of school connectedness across Ukraine, in 2018, data were gathered from 7,846 adolescent students from 200 educational institutions across eight oblasts in Ukraine (Donetsk, Luhansk, Dnipropetrovsk, Zaporizhia, Kharkiv, Mykolaiv, Lviv, and Kyiv oblasts). Findings from both studies show that school connectedness can be used as a tool to promote positive and healthy development in adolescents. Specifically, high levels of school connectedness increase readiness for civic participation, academic performance, and life satisfaction. In contrast, school connectedness reduces the risk for engaging in political violence, bullying or victimisation, decreases externalising and internalising problems, and reduces the likelihood to consider school dropout^{9 10}. Overall, it was concluded that through school connectedness, the education system could contribute positively to the educational, behavioural, psychosocial, and civic adjustment of adolescents.

Equally important is the investigation of what is the driving force in the relationship between school connectedness and positive developmental outcomes. In nurturing school connectedness, numerous individual and contextual factors were identified in SeeD's and UNICEF's studies on school connectedness using adolescent participants. At the individual level, pro-social orientation (such as empathy), interpersonal skills (such as self-confidence and social skills) and executive functioning, all predicted increased levels of school connectedness⁸. At the contextual level, adolescents coming from connected families experience higher levels of school connectedness, highlighting the importance of establishing family-based positive relationships on the path towards school-based positive relationships⁸. Furthermore, school-related factors also contribute to experiences of school connectedness; for instance, elements of a safe and inclusive school environment as well as high-quality teaching, all predict enhanced levels of school connectedness (for a detailed review of all findings, please read UNICEF's reports)⁹. Having clear and consistent rules on what is expected from students is associated to school connectedness, and this may be because schools that promote mutual respect in the classroom are freed from concern about being

⁵ Niehaus, K., Rudasil, K. M., & Rakes, C.R. (2012). A longitudinal study of school connectedness and academic outcomes across sixth grade. *Journal of School Psychology, 50*(4), 443-60.

⁶ Catalano, R., Haggerty, K., Oesterle, S., Fleming, C., & Hawkins, J. (2004). The importance of bonding to school for healthy development: Findings from the social development research group. *Journal of School Health, 74*, 252–261.

⁷ Resnick MD1, Bearman PS, Blum RW, Bauman KE, Harris KM, Jones J, Tabor J, Beuhring T, Sieving RE, Shew M, Ireland M, Bearinger LH, Udry JR.

⁸ Crespo, C., Jose, E. P., Kielpikowski, M., & Pryor, J. (2013). "On solid ground": Family and school connectedness promotes adolescents' future orientation. *Journal of Adolescence, 36*, 993-1002.

⁹ Lordos, A., Morin, H., Fanti, K., Lemishka, O., Guest, A., Symeou, M., Kontoulis, M., and Hadjimina, E. (2019) "An evidence-based analysis of the psychosocial adaptability of conflict-exposed adolescents and the role of the education system as a protective environment", Ukraine: United Nations Children's Fund (UNICEF).

¹⁰ Symeou, M., Machlouzarides, M., Guest, A., Morin, H., Lordos, A., Fanti, K., & Dryga, A. (2020) "Adolescents and School Connectedness: How peer and teacher support, and emotional connection to school influence Ukrainian adolescents", Ukraine: United Nations Children's Fund (UNICEF).

ridiculed or teased¹¹. These outcomes are in line with global findings. In a study of 5,595 adolescent students, it was found that counselling services that are responsive to students' needs help adolescents to be connected to school¹². School counsellors who create personal and positive relationships with students, help them realise that they are wanted and belong in their school, as well as help them realise their potential and to feel more connected to their schools¹¹. All in all, determinants of school connectedness are multifactorial; thus, for adolescents to experience school connectedness, an interplay of individual and environmental influences should be encouraged and promoted.

The present adolescent study on adolescents in Ukraine will investigate school connectedness, longitudinally. In particular, this report will focus on the contributing factors involved in experiences of school connectedness, as well as the long-term significance of school connectedness for adolescents' well-being and adjustment. In research, exploring longitudinal relationships is imperative because it allows researchers to look at changes in patterns over time. In other words, longitudinal data allow us to investigate whether, for instance, nurturing school connectedness at one time-point will bring about changes in adolescents' future development. Additionally, longitudinal research helps identify whether environmental influences can bring about future changes in adolescents' experiences of school connectedness. Even though we have evidence in the context of Ukraine of how experiences of connectedness contribute to adolescent development, or how family or school-related factors have an impact on experiences of connectedness, the aim in the present report is to investigate the *longitudinal* determinants and significance of school connectedness. This will allow us, for the first time, to comment on cause-and-effect relationships. Specifically, the study aims to answer the following research questions:

1. What are the levels of key indicators which measure connectedness (peer support, teacher support, emotional connection to school)?
2. How important is school connectedness for adolescent' long-term well-being and adjustment?
3. What are the longitudinal determinants of school connectedness?

2.2. Scope of the study

This report, developed by SeeD and UNICEF, is based on the analysis of data collected in the second and third waves of the USE adolescent component survey. The first wave of the survey took place in 2017, wherein 3,311 adolescents – aged 13-17 years old – living in the Donetsk and Luhansk oblasts (GCA) took part in the study. Analyses provided very interesting insights into how school connectedness is experienced in the conflict-affected part of Ukraine and how it can contribute to adolescents' healthy development. However, analyses are based on cross-sectional data. Cross-sectional designs have several benefits, but while causal hypotheses can be investigated, findings should be interpreted with caution. This limitation is overcome in the current study. This study is based on a longitudinal research design, which, as a design, helps advance knowledge. Upon availability, longitudinal research designs are preferred for numerous reasons, such as:

- Allowing us to reliably explore the link between earlier life circumstances and later outcomes. Although predictive modelling can be performed using cross-sectional designs, findings should be viewed as suggestive rather as definitive. In contrast, longitudinal studies offer a more detailed view of participants' experiences.

¹¹ Ryan, A. M., & Patrick, H. (2001). The classroom social environment and changes in adolescents' motivation and engagement during middle school. *American Educational Research Journal*, 38(2), 437-460.

¹² Lapan, R. T., Wells, R., Petersen, J., & McCann, L. A. (2014). Stand Tall to Protect Students: School Counselors Strengthening School Connectedness. *Journal of Counseling & Development*, 92, 304-315.

- Allowing us to establish the order in which relationships occur. Longitudinal designs help build up a more accurate and reliable account of how participants experience their social environment. For instance, does school connectedness contribute to decreased internalising problems, or do internalising problems contribute to decreased levels of school connectedness? Longitudinal research designs allow researchers to investigate such cause-and-effect hypotheses, which is essential when designing prevention and intervention programmes.

To investigate how school connectedness is experienced across Ukraine in the long-term, 2,045 Ukrainian adolescents provided data in both the second and third waves of data through self-report questionnaires. Adolescents were recruited from educational institutions from eight oblasts in Ukraine: Donetsk (GCA), Luhansk (GCA), Dnipropetrovsk, Zaporizhzhia, Kharkiv, Mykolaiv, Lviv, and Kyiv oblasts.

The study aims to provide insight into the longitudinal associations of school connectedness among Ukrainian adolescents and the significance of a number of different factors in nurturing connectedness. In turn, the findings are expected to inform the Ministry of Education and Science and other key stakeholders on the importance of promoting healthy social networks among adolescents, as well as encouraging a positive social environment for adolescents. Findings which respond to each of the research questions will also inform school experts and key education stakeholders on how intervention programmes should be tailored. Furthermore, this report will shed light onto which elements of school connectedness require additional work, allowing key policy experts to shift their attention to where more emphasis is needed. The study will also highlight which factors contribute to the development of connectedness by investigating its association with a multitude of factors, including family-related factors (e.g. parental monitoring, parental involvement), school-related factors (e.g. academic performance and tendency for school dropout), and risk factors, such as internalising and externalising problems.

3. Methodology

The measures complied with UNICEF's and national ethical considerations on conducting research using children. In order to select the indicators most relevant for adolescents, an extensive literature review was conducted at the early stages of the project along with consultations with experts on adolescent development. Numerous indicators were included in the final questionnaires of the second and third waves of study on Ukrainian adolescents. Indicators range from adolescents' experiences in the school setting, such as peer support, teacher support, and emotional connection to school (see Figure 1), to experiences of bullying or victimisation, and academic performance. Furthermore, the questionnaires included, among others, items on quality of parenting (e.g. parental monitoring, parental involvement, family abuse), life skills, externalising and internalising behaviours (e.g. conduct disorder, aggression, anxiety, and depression), and quality of life. A full list of the indicators can be found in the appendix.

3.1. Instruments: Questionnaires

Each of the indicators within the study was measured by combining 2 to 5 items. Each of the items in an indicator measured different aspects of the overall phenomenon that each indicator sought to capture, and was then aggregated to form a composite scale. For instance, school connectedness was measured through six items – 2 items per component of the indicator (see Figure 1). Likewise, to measure, for example, tendency to consider school dropout, three items were designed; adolescents were asked respond to the following items: (i) “Sometimes I feel unsure about continuing my studies at school/vocational school”, (ii) “I often think about dropping out of educational institution”, and (iii) “I intend to drop out of school/vocational school”. In some cases, internationally validated psychometric instruments that provide reliable measures of the indicators were used in the questionnaire, while in other cases original items were designed using best practices in psychometric scale construction.

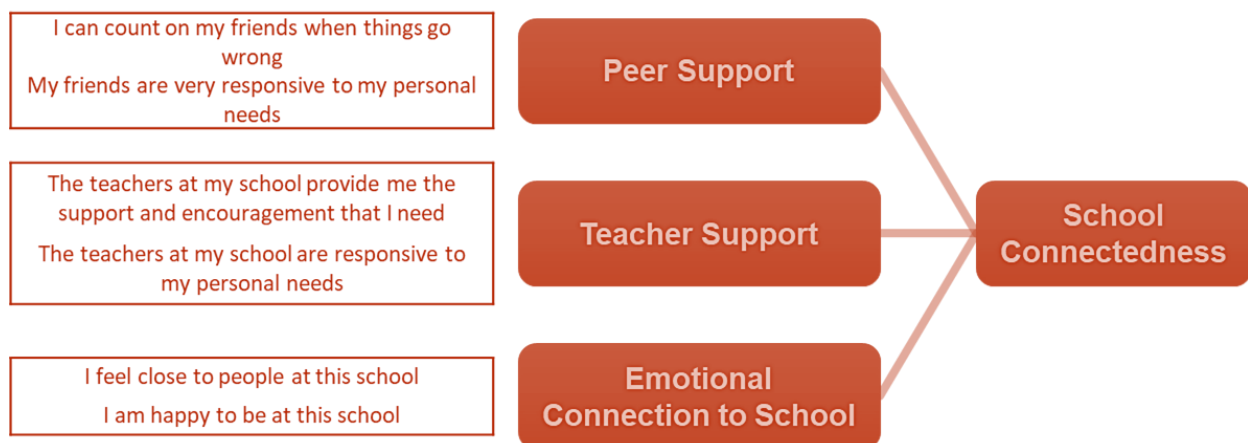


Figure 1. School Connectedness, its constituent elements, and questionnaire items.

3.2. Ethical considerations

The research team thoroughly reviewed all ethical considerations to ensure the protection of children’s rights during the study. UNICEF contracted the Ukrainian Institute for Social Research after Oleksandr Yaremenko¹³ (UISR), a leading institute accredited for conduct of national surveys and with substantial experience in school-based surveying to provide expert advice on the questionnaire formulation and its translation. UISR is the institute which gathered the first and second waves of data for the Eastern Ukraine Social Cohesion and Reconciliation (SCORE) adolescent survey. UISR is also the Ukrainian accredited institute for the European School Survey Project on Alcohol and Other Drugs¹⁴ (ESPAD) and leads Ukraine’s data collection for the Health and Behaviour in School-aged Children¹⁵ (HBSC), both cross-national studies taking place in 35 and 48 countries respectively. Approval for the survey was obtained from the Commission on Psychology and Pedagogy of the Scientific-Methodical Council of the Ministry of Education and Science of Ukraine¹⁶. Before administering the paper-based questionnaire, regional field managers from the UISR National network received a full-day training. To achieve the longitudinal nature of the project, the third wave of the study was formed on the basis of the second wave of data collection, by ensuring before the survey that many of the participating classes took part in last year’s survey as well. Students were informed about the objectives of the study, how the data would be used and that participation was on a voluntary basis, that not all the questions needed to be answered, and

¹³ <http://www.uisr.org.ua/>

¹⁴ <http://www.espad.org>

¹⁵ <http://www.hbsc.org>

¹⁶ <http://www.mon.gov.ua/>

that they could withdraw at any time. Each student received a questionnaire and an individual envelope in which they sealed their completed questionnaire. Then all individual envelopes of the class were sealed by the interviewer in a second envelope prior to the return of the teacher in the room.

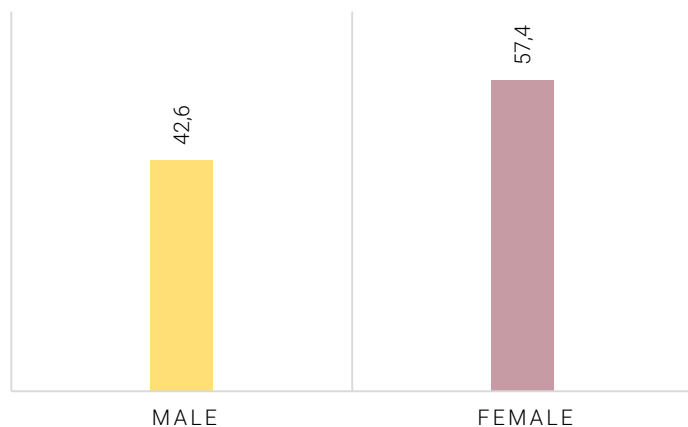
3.3. Data collection and analysis

To achieve the longitudinal aims of the project, data were collected from the same participants over two time points. All adolescent data were collected in Ukraine, through a paper-and-pencil self-report questionnaire in the Ukrainian language, from 200 education institutions. Data were collected from eight oblasts: Donetsk (GCA), Luhansk (GCA), Dnipropetrovsk, Zaporizhzhia, Kharkiv, Mykolaiv, Lviv, and Kyiv oblasts. For the Donetsk and Luhansk regions, a booster sample was formed by zones separately: zone 0-5 km, zone 5-15 km and zone 15+ km from the territory of the contact line.

For the first time-point, data were collected during the first trimester of the 2018-2019 school-year (data collection lasted from October to early December). A total of 7,846 adolescents aged between 12-19 years old (mean age = 15.46 years) participated in this phase of the study. Both genders were represented in the sample; 46.3 per cent of the sample (3,634 males) consisted of males' responses, whereas girls represented 53.5% (4,197 females) of the sample. Fifteen adolescents (.2%) did not provide their gender information.

Similarly, for the second time-point, data were collected during the first trimester of the 2019-2020 school-year as well (data collection lasted from October to late November). In this survey, 8,643 adolescents aged between 13-19 years old (mean age = 15.26 years) participated. Both males and females took part in the study; boys represented 46.5 per cent (4,022 males) of the sample, whereas 52.7% (4,556 females) of the sample were girls. Sixty-five adolescents (.8%) did not provide their gender information.

From all those participants, 2,045 adolescents (aged between 14-19 years old) took part in the surveys at both time-points¹⁷. Adolescents were both males ($N = 872$; 42.6% of the sample) and females ($N = 1,173$; 57.4% of the sample). They resided in either one of the eight oblasts used for data collection, with an oversampling on adolescents living within 15 kilometres of the contact line (see Figures 2 & 3). Figure 2. Gender representation in the sample (in %; $N = 2,045$)



¹⁷ Initially, 2,047 participants took part in the data collection at both time-points, but two adolescents were excluded from further analyses due to a very high percentage of missing responses. The final number of adolescents used in longitudinal analyses is 2,045.

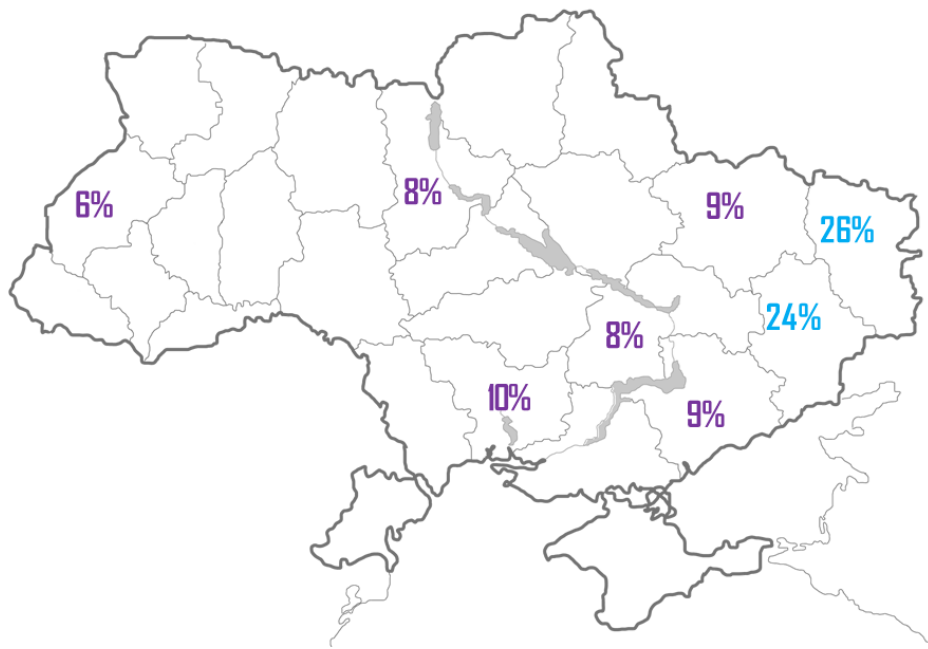


Figure 3. Percentage of surveyed adolescents across the eight oblasts.

4. School Connectedness – Findings

4.1. Experiences of peer support, teacher support, and emotional connection to schools among adolescents across Ukraine

In the adolescent study in Ukraine, students experience lower levels of teacher support than peer support and emotional connection to school (see Figure 4). Interestingly, this finding is consistent across the country (see Figure 5). Considering that in eastern Ukraine teachers experience more daily conflict-related experiences than teachers from other regions (e.g. shelling), this demonstrates that young people share similar views on their experiences of school connectedness irrespective of where they reside. This is an important finding and shows that prevention and intervention programmes aimed at enhancing teacher support should constitute a nationwide priority.

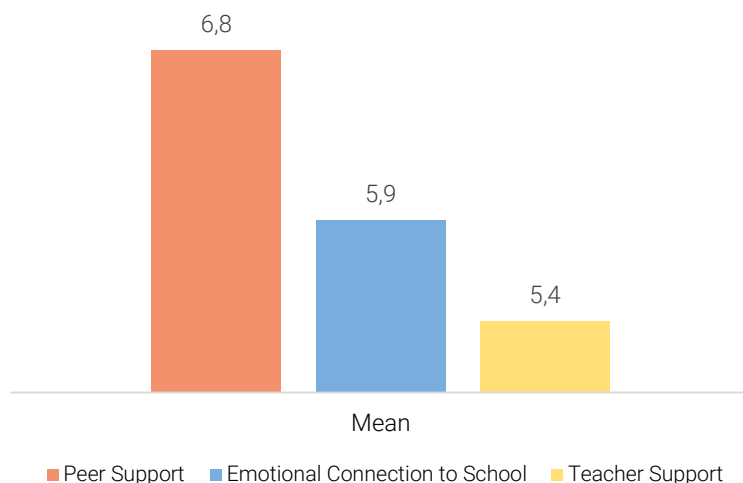


Figure 4. Levels of School Connectedness in Ukraine

All scores on the graphs are out of 10, where 10 means the phenomena is observed strongly and prevalently, and 0 means it is not observed whatsoever

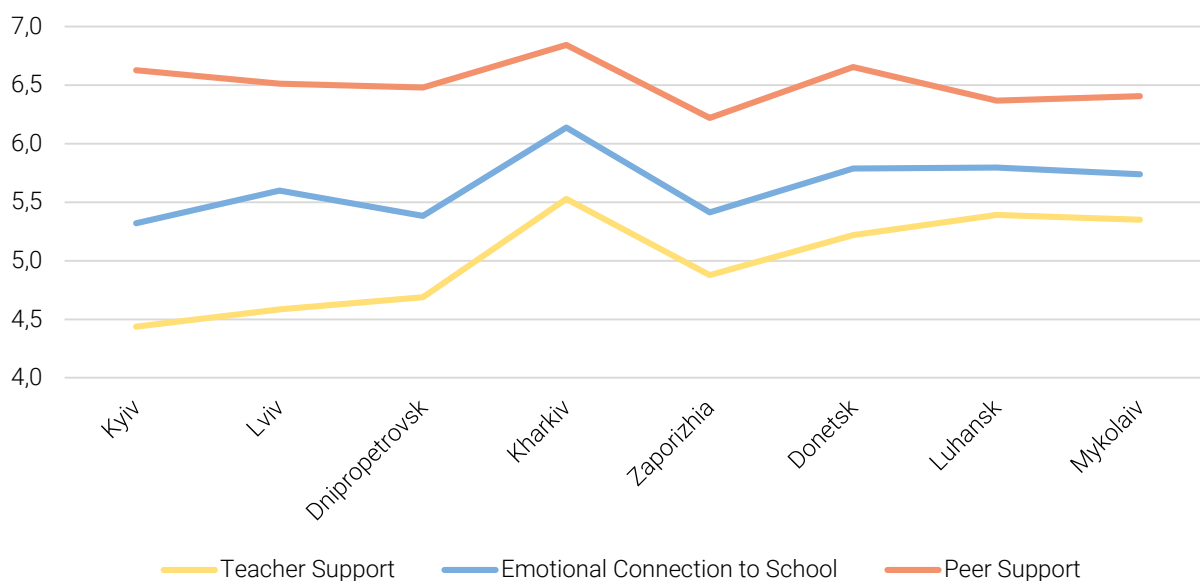


Figure 5. Levels of School Connectedness across the oblasts in Ukraine, scores out of 10.

Further breakdown of the constituent elements of School Connectedness shows that the worst performing items are about teachers not being responsive enough to students' needs, and teachers not providing them with the support and encouragement they need (see Table 1). For instance, in regard to the item "The teachers at my school are responsive to my personal needs", 1 every 5 adolescents (20%) consider this to be absolutely false. In contrast, only a small minority of adolescents reported extremely low levels of peer support. For example, on the item "I can count on my friends when things go wrong", only 7% of adolescents (approximately 1 every 14 young people) consider this to be absolutely false whereas the percentage of adolescent students who reported that they totally agree with the statement goes up to 45%.

Our findings provide support to the ongoing education reform, wherein one of the goals is to enhance teacher support and to apply student-centred learning approaches. Student-centred learning recognises the importance of learners' voices as central to their learning; thus schools which adopt this approach move past the traditional approach in education where students adopt a passive, receptive role during instruction. Student-centred education helps individuals achieve lifelong learning because it provides them with the necessary basis and skills on how to learn new knowledge and how to become autonomous and independent.

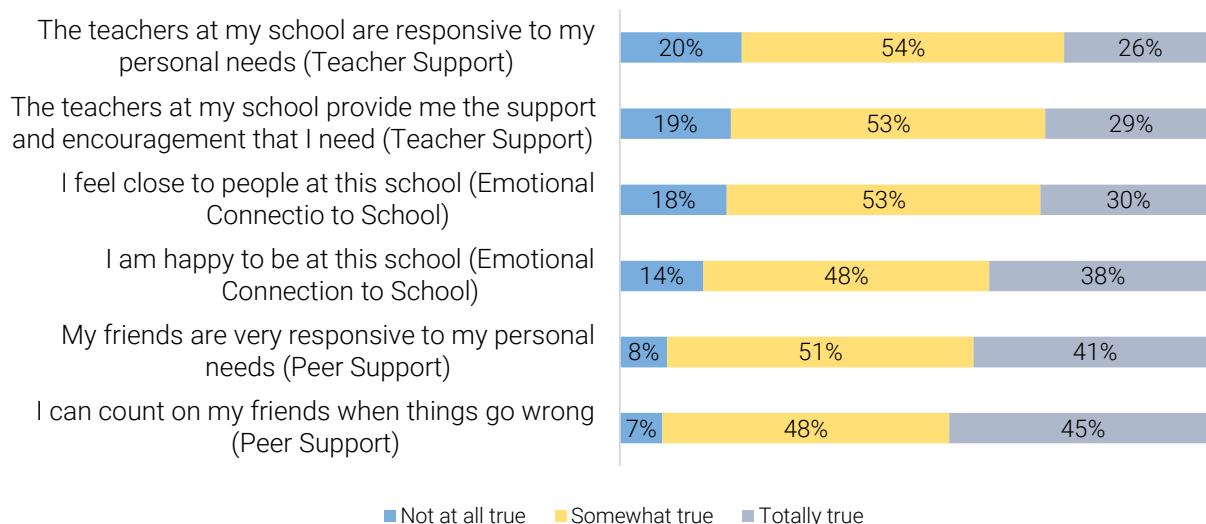


Table 1. Breakdown of items of School Connectedness.

4.2. The importance of nurturing long-term School Connectedness

4.2.1. Profiles of adolescents based on school connectedness

The present section explores how differences in levels of school connectedness have an effect on adolescent developmental outcomes. Our analyses demonstrated that there are five different profiles of adolescents based on their levels of school connectedness, with only some of these adolescents experiencing favourable outcomes. Thus, one cannot ignore the importance of experiencing school connectedness as an important determinant for the positive adjustment of adolescents. The positive effects of school connectedness are not only limited in the school setting, but they also extend in behavioural, mental health, and civic adjustment^{18 19}. The five distinct profiles of adolescents based on levels of school connectedness (see Figure 6) are:

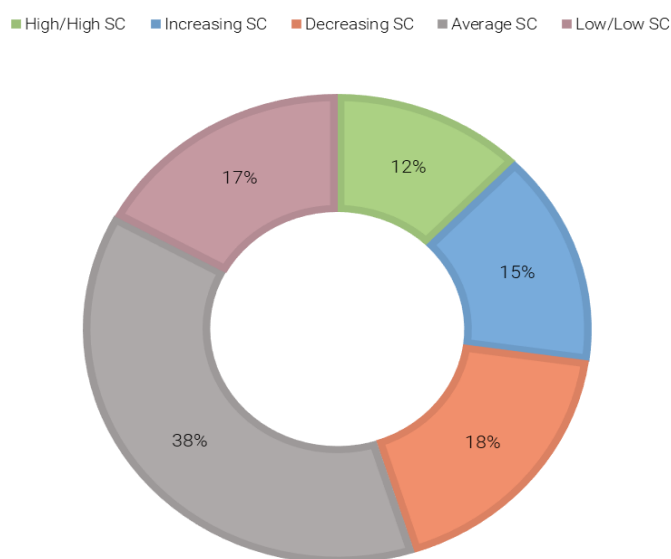


Figure 6. Five profiles of adolescents based on their experiences of school connectedness, %.

¹⁸ Lordos, A., Morin, H., Fanti, K., Lemishka, O., Guest, A., Symeou, M., Kontoulis, M., and Hadjimina, E. (2019) "An evidence-based analysis of the psychosocial adaptability of conflict-exposed adolescents and the role of the education system as a protective environment", Ukraine: United Nations Children's Fund (UNICEF).

¹⁹ Symeou, M., Machlouzarides, M., Guest, A., Morin, H., Lordos, A., Fanti, K., & Dryga, A. (2020) "Adolescents and School Connectedness: How peer and teacher support, and emotional connection to school influence Ukrainian adolescents", Ukraine: United Nations Children's Fund (UNICEF).

1. High/High School Connectedness category: Adolescents who experience high levels of school connectedness at both times-points (see Figure 7). In other words, mean scores were high on items of peer support (e.g. “My friends are very responsive to my personal needs”), teacher support (e.g. “The teachers at my school provide me the support and encouragement I need”), and emotional connection to school (e.g. “I feel close to people at this school”). Only about 12% of adolescents in Ukraine belong in this category.
2. Increasing School Connectedness category: Adolescents whose experiences of school connectedness increased in the span of one year. In other words, adolescents displayed average levels of school connectedness in the 2018 data collection, but high levels of connectedness one year later (see Figure 7). Fifteen per cent (15%) of adolescents in Ukraine belong in this category.
3. Decreasing School Connectedness category: Adolescents whose experiences of school connectedness decreased in the span of one year. Eighteen per cent (18%) of adolescents in Ukraine belong in this category. Adolescents from this category displayed high levels of school connectedness in 2018 when the second wave of data collection took place, but showed average levels of connectedness one year later (see Figure 7).
4. Average School Connectedness category: Adolescents who experience average levels of school connectedness. Similar to the “high/high school connectedness” category, adolescents here have similar experiences of connectedness across the two time-points (see Figure 7). More than one-third of adolescents in Ukraine (38%) belong in this category.
5. Low/Low School Connectedness category: Adolescents who score low in school connectedness in both years (see Figure 7). What this means is that those adolescents experience an emotional disconnection from their school, and consider their relations with their peers and teachers as lacking interest, warmth, and support. Approximately 17 per cent of Ukrainian adolescents belong in this category.

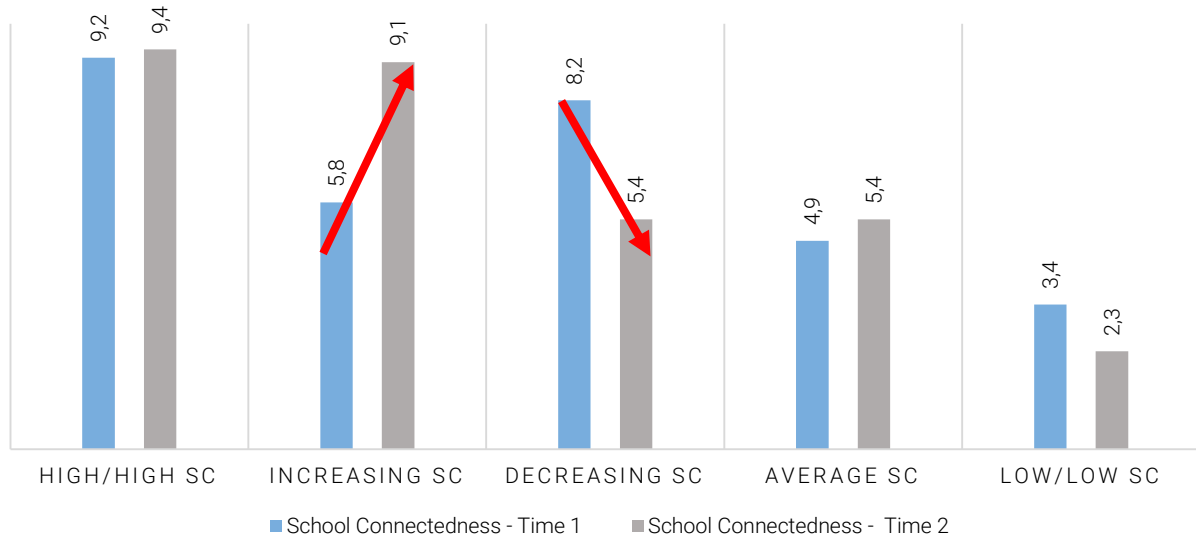
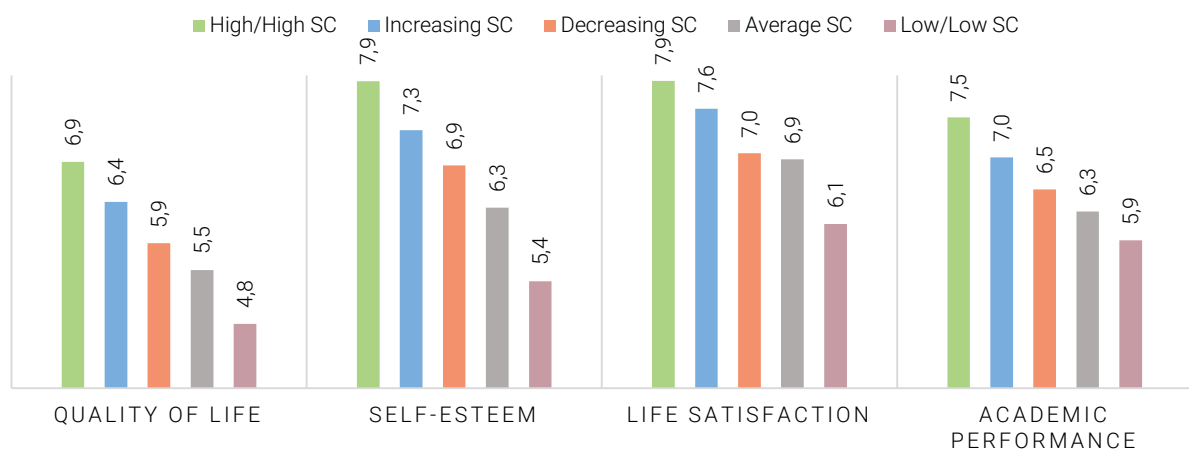


Figure 7. Subtypes of adolescents and their mean scores of school connectedness across the two time-points, scores out of 10.

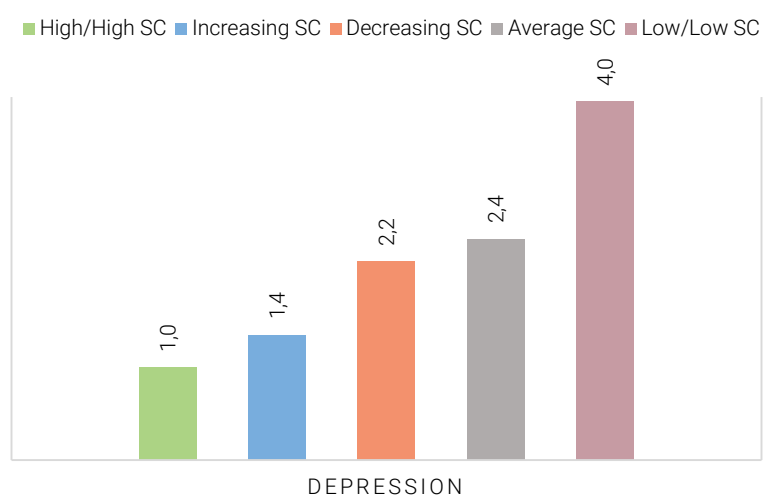
The next subsection explores how differences in the profiles of adolescents bring about differences in certain behaviours as well.

4.2.1.1. School connectedness and Well-Being and Performance

Differences in levels of school connectedness, unsurprisingly, brought out differences in adolescents' well-being and academic performance. Group differences were found in adolescents' self-esteem, life satisfaction, academic performance, and their overall quality of life. Compared to all subtypes of adolescents, adolescents in Ukraine who experience long-term school connectedness display the most positive well-being. For instance, mean scores in measures of self-esteem for adolescents who experience long-term connectedness is 7.9, but this falls to 5.4 for adolescents with low levels of school connectedness.



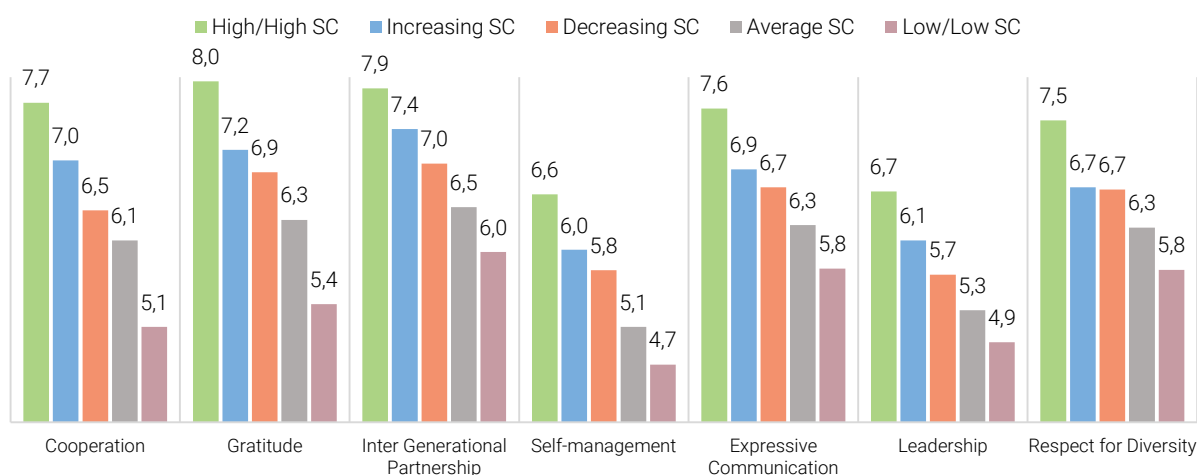
Similarly, our analyses show that different levels of school connectedness also bring out differences in mental health experiences. Long-term experiences of high school connectedness are linked to less depressive symptoms. Specifically, adolescents in the "high/high SC" category display the least depression symptoms, with a mean of just 1.0 (on a 0-10 scale). Likewise, mean levels in depression are also quite low in adolescents who experience moderate/high levels of connectedness (the "increasing school connectedness" category). In contrast, it seems that most symptoms of depression (mean score = 4.0) are experienced when adolescents score low school connectedness at both time-points.



Overall, in line with global findings, school connectedness appears to have a beneficial impact on adolescents' educational attainment and well-being. The positive feelings that come as a result of supportive relationships with teachers and peers impact positively on how adolescents view themselves, their strengths, and their overall life.

4.2.1.2. School connectedness and Life Skills

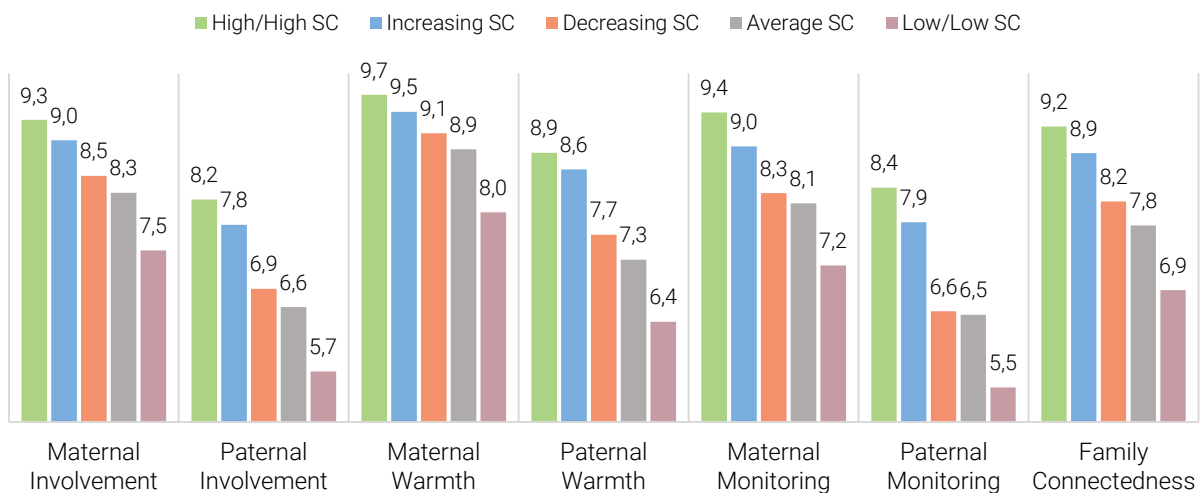
Life Skills differences, such as in Cooperation skills, Self-Management skills, and Leadership skills, were also uncovered. When adolescents experience long-term peer support, teacher support, and are emotionally connected to their school, life skills show an increasing trend. Specifically, experiencing longitudinally high or average-to-high school connectedness is linked with high levels of life skills. For instance, in items measuring Cooperation skills, adolescents from those subtypes obtained mean scores of 7.7 and 7.0, respectively. In contrast, other subtypes remain at average levels; for instance, adolescents in the “average SC” or “low/low SC” obtained, for Cooperation skills, mean scores of 6.1 and 5.1, respectively. This is in line with previous findings, wherein the acquisition and development of life skills were strongly influenced by school connectedness²⁰.



4.2.1.3. School connectedness and Familial experiences

When adolescents experience peer support, teacher support, and emotional connection to school, this is associated with higher levels of positive familial experiences, such as parental monitoring, parental warmth, and family connectedness. For instance, mean scores in family connectedness for adolescents who also score high in school connectedness at both time-points is 9.2, but this falls to 6.9 for adolescents who experience low levels of school connectedness. Considering that home and school constitute two of the most important microsystems for children and adolescents, our findings provide support to the longstanding view that what happens at home transfers to the school environment and vice versa. Being in warm and supportive relationships provides a model for adolescents which is then transferred to other microsystems and social relationships.

²⁰ Symeou, M., Morin, H., Lordos, A., Dryga, A., Fanti, K., Christou, G., Machlouzarides, M., Guest, A., & Lemishka, O. (2020) “The acquisition, development and impact of Life Skills on Ukrainian adolescents”, Ukraine: United Nations Children’s Fund (UNICEF).



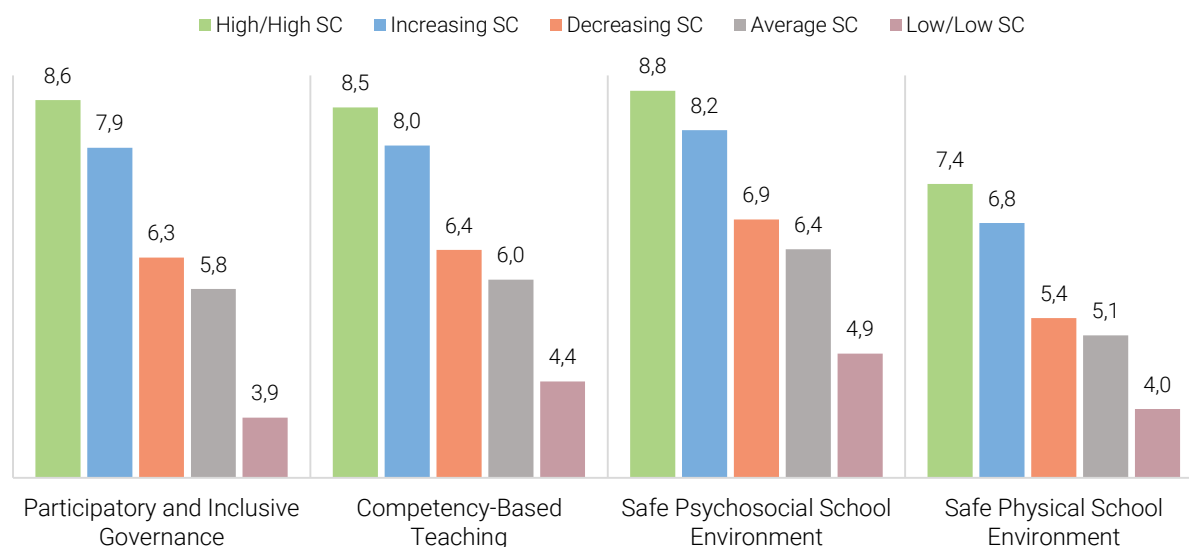
4.2.1.4. School connectedness and School policies

School policies are defined as established expectations of how schools should operate. They help with the day-to-day functioning of the school and in creating a safer school environment. Such policies include (i) a safe physical school environment (e.g. such as offering students healthy and nutritious meals options, clean and adequately equipped restrooms, and modern pedagogical equipment), (ii) a safe psychosocial school environment (e.g. offering time to interact with others, and having available psychosocial services for adolescents who need support), (iii) competency-based teaching (e.g. promoting critical thinking and problem-solving skills, having group discussions), and (iv) participatory and inclusive governance (e.g. feeling valued and heard in the school, and having competent student governance school bodies which genuinely promote the needs and interests of students).

Similar to other findings, school connectedness relates to positive perceptions about the school's environment. Specifically, connected adolescents perceive their schools as being more inclusive, safe, and high-quality than students with average levels or low levels of connectedness. For instance, perceptions of a participatory and inclusive school environment were more pronounced in connected adolescents (mean score = 8.6) than in students who continuously experience low levels of school connectedness (mean score = 3.9). When students lack the experience of supportive peer or teacher relationships and are emotionally disconnected from their school, they are also more likely to perceive negatively the way their school operates. For instance, they do not consider the school as a welcoming place, or they feel that their views in school-related matters will not be heard.

We know from the international literature that microsystemic factors are highly important for adolescents to experience positive behavioural and psychosocial development, educational attainment, and meaningful social relationships. Our findings show how essential positive school experiences are for adolescents' development, such as being emotionally invested in the school or experiencing support and care from teachers or peers. When students' experiences with their school-related social relationships are positive and supportive, then adolescents are more likely to transfer these experiences into other significant social relations as well, such as in relationships with their family. Furthermore, experiencing connectedness has an impact on how students perceive their strengths, their abilities, and their quality of life. Indeed, findings from the longitudinal study with adolescents in Ukraine demonstrate that adolescents with long-term experiences of school

connectedness are more likely to have higher self-esteem, be more satisfied with their life, and experience less depressive symptoms.



The findings should be considered by key stakeholders and school experts when designing prevention and interventions programmes. As the school is among the most important microsystems, it should be considered as one of the main sources of providing security and a sense of well-being to children and adolescents. Our findings consistently show that adolescents with long-term experiences of school connectedness score higher in all indicators, followed by students who initially experienced moderate levels of connectedness, but their experiences of connectedness increased the following year. In contrast, the least adolescent adjustment is noted in adolescents who continuously experience low levels of school connectedness. What we see in the findings support the idea of “more is better”. When adolescents experience constantly low school connectedness, they show the highest maladjustment. When adolescents experience moderate levels in school connectedness, outcomes ameliorate. When adolescents experience moderate and high levels interchangeably, outcomes improve even more. And when adolescents experience continuously high levels of school connectedness, this is linked to the highest levels of adolescents’ educational and emotional well-being. Considering how “more is better” and how school connectedness is linked to an array of positive developmental outcomes, schools should work towards nurturing long-term connectedness. Students with high levels of school connectedness like going to school, they like their fellow students, and they like their teachers. As such, schools and school-related experts should work towards creating an environment where connectedness is encouraged. Direct programming could work in promoting connectedness in a number of ways, such as, among others²¹:

1. Provide students with the academic, emotional, and social skills necessary to be actively engaged in school (e.g. engage students in planning for their future, including career and personal goals, and assist them in mapping out steps to take to meet their goals).
2. Use effective classroom management and teaching methods to foster a positive learning environment (e.g. use of interactive and experiential activities, such as group discussions and

²¹ Centers for Disease Control and Prevention (2009). *School Connectedness: Strategies for Increasing Protective Factors Among Youth*. Atlanta, GA: U.S. Department of Health and Human Services.

role-playing, to engage students in learning; and encouraging open, respectful communication about differing viewpoints).

3. Provide professional development and support for teachers and other school staff to enable them to meet the diverse cognitive, emotional, and social needs of children and adolescents (e.g. effective implementation of student-centred pedagogy, a variety of classroom management techniques, and teaching methods, such as cooperative learning).

In addition to direct programming though, school experts should also be mindful of the factors that influence the development of school connectedness. This would ensure that school connectedness interventions would be more effective. This is because, even if direct programming is carefully designed, other factors may contravene and lower the effectiveness of the programme. For instance, even if schools try to encourage school connectedness using different means, programmes may not work in adolescents who suffer from internalising problems, such as depression or anxiety. School-related professionals should be mindful of which factors work in favour or against the development of school connectedness. As we have already mentioned in the introduction section of the report, the determinants of school connectedness are multifactorial; therefore, to gain a reliable view on how to promote experiences of connectedness, we should identify and work on numerous factors. Section 4.4 explores the longitudinal determinants of school connectedness.

4.2.2. Special Section: High versus Low School Connectedness

4.2.2.1. Experiences of peer support, teacher support, and emotional connection to schools among different groups of adolescents

When exploring school connectedness in different subtypes of adolescents, significant differences are identified. Adolescents in the “high/high SC” category (in other words, young people with continuously high levels of school connectedness) report exceptionally high levels of peer support, teacher support, and emotional connection to school (see Figure 8). Emotional connection to school obtained the highest score (mean score = 9.7), whereas peer support obtained the lowest – but still exceptionally high – mean score of 9.2. When exploring all adolescents across Ukraine (see Figure 4), students report considerably lower levels of teacher support compared to peer support and emotional connection to school; however, this is not the case in adolescents who experience long-term school connectedness. Here, adolescents experience positive relationships with all parties; they have high-quality teacher-adolescent and peer relationships from where they get the support they need, *and* they simultaneously feel very close and emotionally invested to their school.

In contrast, adolescents in the “low/low SC” category (in other words, young people who are characterised by continuously low levels of school connectedness) report very low peer support, teacher support, and emotional connection to school (see Figure 8). Even though they report considerably higher peer support (mean score = 4.3) than the other two components, adolescents still score very low. These findings are alarming because 17% of adolescents in Ukraine report low connectedness. These students experience complete emotional disconnection from their school, very poor teacher-student relations, and do not consider their peers as supportive or that they can count on them in times of need. Section 4.2.1. demonstrates that school connectedness is linked to a plethora of adjustment indicators. However, compared to the remaining four subtypes of adolescents, youngsters from the “low/low SC” category report lower self-esteem and life satisfaction, obtain lower grades in school, and are more prone to depression. Furthermore, their family connections are of lower quality; they report lower levels in life skills (e.g. cooperation skills, self-management skills, and respect for diversity) and they report overall lower quality of life. These findings should alert key stakeholders and school experts on urgently working towards enhancing those students’ experiences.

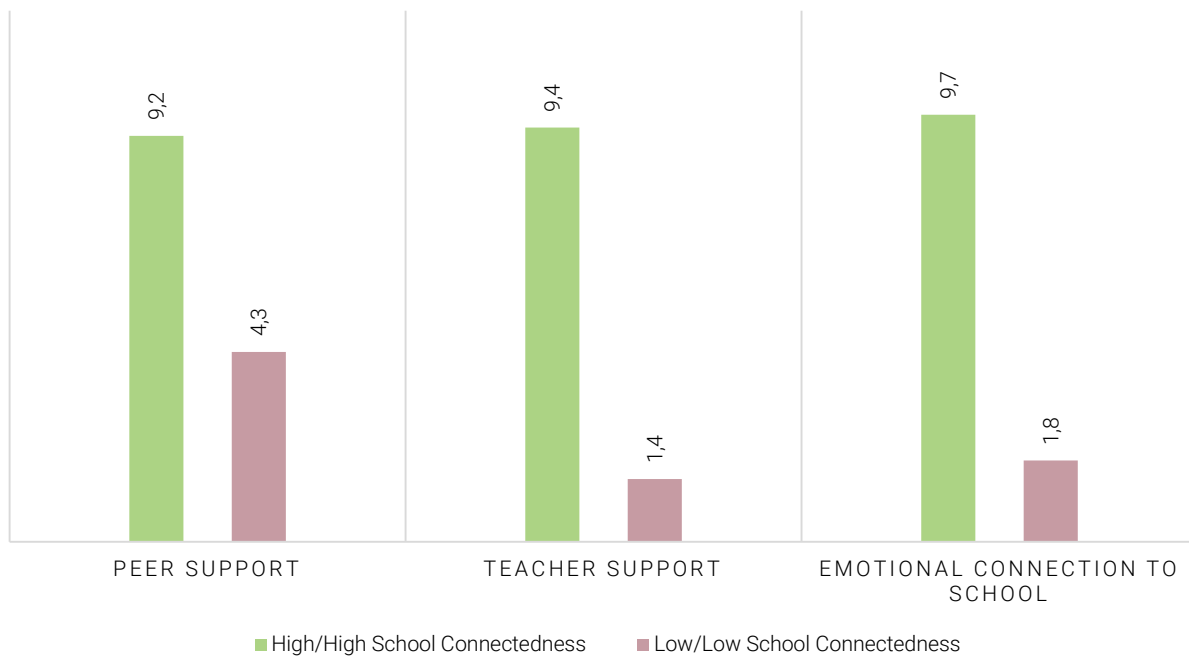


Figure 8. Levels of School Connectedness in Ukraine among adolescents in the “High/High SC” subtype and adolescents in the “Low/Low SC” subtype, out of 10.

4.2.2.2. Adolescents with high versus adolescents with low school connectedness: Differences in their responses

The findings in the current adolescent study indicate that there is an urgent need to improve the school-related experiences of a large proportion of Ukrainian students. Whereas 12% of adolescent experience connectedness in their school environment, 17% experience the complete opposite. This poses the need to take a deeper look at how the education systems is viewed differently between these two vastly different subtypes of adolescents. Frequencies of the responses on items measuring peer support, teacher support, and emotional connection to school are presented below:

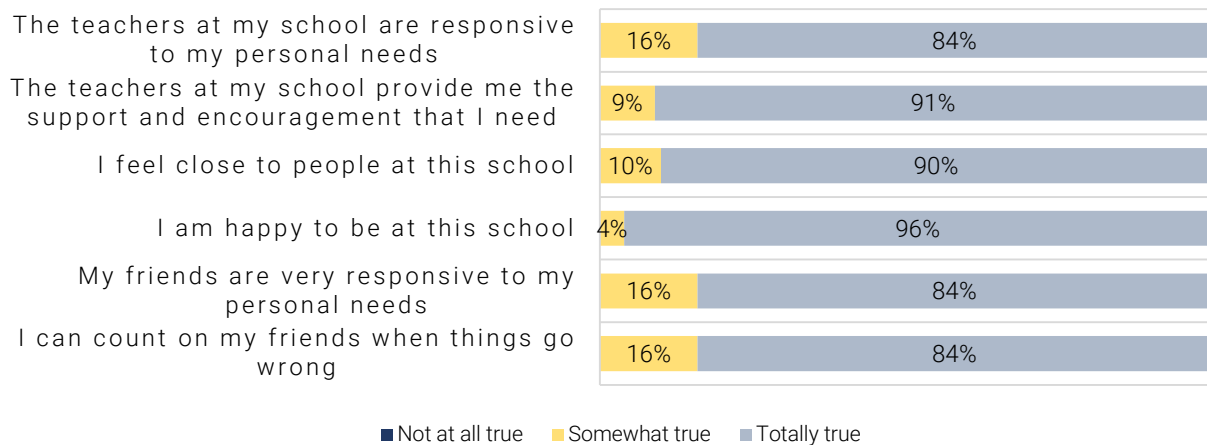


Table 2. Breakdown of School Connectedness items among adolescents in the “High/High SC” subtype.

- I. Peer Support: While the vast majority (84%) of connected adolescents feel that it is “totally true” that their friends are responsive to their needs or that they can count on their friends in times of need (see Table 2), the opposite is noted for disconnected adolescents. For instance, only one in ten adolescent students in the “Low/Low SC” category feel that their friends are responsive to their personal needs (see Table 3).
- II. Teacher Support: Likewise, substantial differences were identified between adolescents with differing experiences of teacher support. For instance, 84% of students in the “high SC” subtype feel that their teachers are responsive to their personal needs. However, none of the students with low levels of school connectedness chose the equivalent option. In contrast, 73% of those adolescents feel that it is “not at all true” about teachers being emotionally responsive (see Tables 2 & 3). The relatively big difference in the responses indicates an important discrepancy between these two subtypes of students in how they experience teacher-student relations in their schools.

III. Emotional Connection to School: In how emotionally invested adolescents are towards their schools, evidently, youngsters with long-term school connectedness obtain noticeably higher scores. For instance, 96% of those students are happy to be at their school (see Table 2). Conversely, only 2% of adolescents with low school connectedness share the same sentiment. Instead, more than half report that they are unhappy to be at their school, and 7 in 10 students do not feel close to the people in their school (see Table 3).

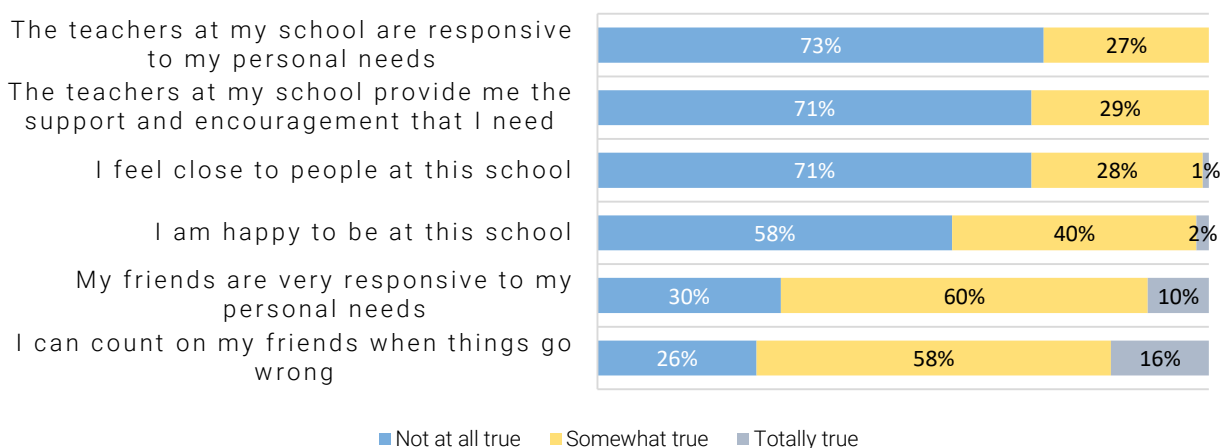


Table 3. Breakdown of School Connectedness items among adolescents in the “Low/Low SC” subtype.

The fact that one in six adolescent students in Ukraine experiences the lowest levels of school connectedness is alarming. This means that one in six adolescents has lost all faith in the education system. They do not believe that their teachers or peers care for them or want to support them, or that their school is a place that they feel close to. This finding is important because relations with microsystemic figures have a big impact on how people view themselves and others. Thus, the negative peer-adolescent and teacher-adolescent relations that characterise adolescents with low school connectedness compromises the young people’s ability to trust their worth and abilities, or to be able to form current or future relationships of quality. Low self-esteem, low levels of life skills, negative emotionality, or challenging familial experiences bring about negative public health consequences and economic costs. For instance, a recent study by World Health Organization estimates that depression and anxiety disorders cost the global economy US\$ 1 trillion annually in lost productivity²². Considering how all these are more prevalent in youth with low levels of school connectedness, this poses the urgent need to implement well-designed programmes that will enrich the adolescents’ school-related experiences.

4.3. Outcomes of School Connectedness

As already mentioned, in 2018, the Centre for Sustainable Peace and Democratic Development (SeeD) in collaboration with UNICEF conducted a large-scale study, using 7,846 adolescent participants from 200 educational institutions across Ukraine. Despite its cross-sectional design, findings illustrate that school connectedness is an important determinant of adolescent adjustment. Specifically, among others, connectedness lessened bullying behaviours or victimisation experiences, and predicted decreased levels of considering early school leaving, decreased levels of internalising problems (e.g. anxiety and depression), and lower risky behaviours (e.g. substance use

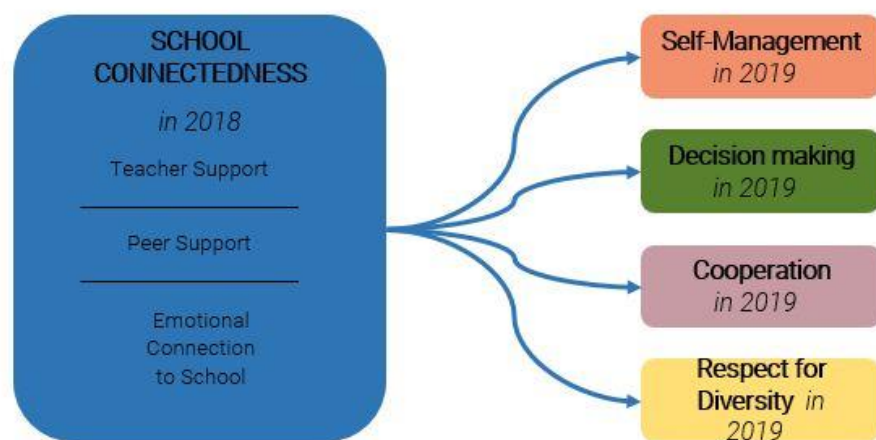
²² World Health Organization (WHO). (2019). Mental health in the workplace [Information Sheet]. Retrieved from https://www.who.int/mental_health/in_the_workplace/en/

and unsafe sexual behaviours). Concurrently, school connectedness was predictive of academic performance and life satisfaction. While cross-sectional designs do give readers important information relevant to specific issues, due to their nature, predictive findings should be viewed mainly as suggestive. The present study addresses these limitations. Predictive analyses were performed using a longitudinal design, using the data from 2,045 adolescents that completed the study's questionnaires at two time-points – both in the 2018 and 2019 data collections.

To test the unique impact of school connectedness on adolescent development longitudinally, a series of structural equation models (SEM) was performed. Analyses aimed to investigate how feeling connected to one's school contributes longitudinally to adolescents' positive development. Findings suggest that, indeed, school connectedness during adolescence promotes long-term positive youth development.

4.3.1. School Connectedness and Life Skills:

School connectedness was identified as a predictor of certain life skills. Specifically, adolescents with high levels of school connectedness in 2018 reported higher self-management skills, cooperation skills, decision-making skills, and respect for diversity



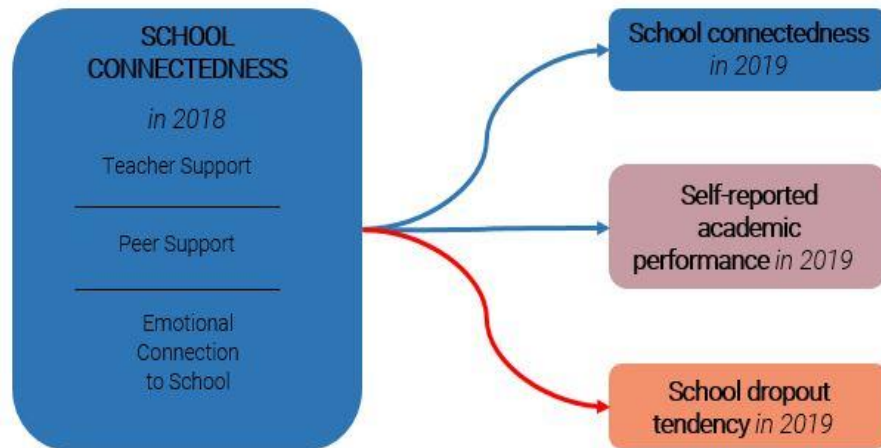
one year later. This is an important finding because, globally, it is now recognised that life skills contribute to resilience and has long-term societal benefits such as educational benefits, professional benefits, and social benefits. For instance, as people grow older and responsibilities increase, being able to manage themselves is important if they want to succeed in what they do. All in all, life skills are beneficial in creating a strong powered force of individuals who will contribute productively to the society; they promote, among others, autonomy, independent and collective thinking, and responsibility. Additionally, life skills are associated to less negative emotionality (e.g. anxiety and depression), less risky behaviours (e.g. substance use), and higher readiness for civic participation and quality of life²³. Hence, identifying how school connectedness benefits life skills acquisition in the long-term has important implications for school-related policies and decisions.

²³ Symeou, M., Morin, H., Lordos, A., Dryga, A., Fanti, K., Christou, G., Machlouzarides, M., Guest, A., & Lemishka, O. (2020) "The acquisition, development and impact of Life Skills on Ukrainian adolescents", Ukraine: United Nations Children's Fund (UNICEF).

4.3.2. School Connectedness and School-Related Factors:

Unsurprisingly, school connectedness has a longitudinally positive impact on school-related factors. For instance, connected adolescents are more likely to have improved academic performance one year later. Furthermore, school connectedness predicts lower tendency to consider early school leaving. Similar findings were noted both in previous cross-sectional *and* longitudinal studies.

Previous studies report that students' perceptions of school connectedness were predictive of their academic outcomes in the future²⁴ and the degree to which they would drop out of school²⁵. Importantly, these outcomes were also evident six and nine years afterwards²⁴. One



possible explanation for the findings is that emotional investment to the school and more positive student-teacher and student-peer relations help adolescents become more committed to school life, which inevitably leads to higher grades and lesser likelihood of considering to drop out of school. These associations are identified both in the cross-sectional study in Ukraine (in 2018) and in the current study, which uses a longitudinal design. This confirms that investing in programmes designed to enhance experiences of school connectedness will produce long-lasting advantageous educational outcomes.

4.3.3. School Connectedness and Well-Being:

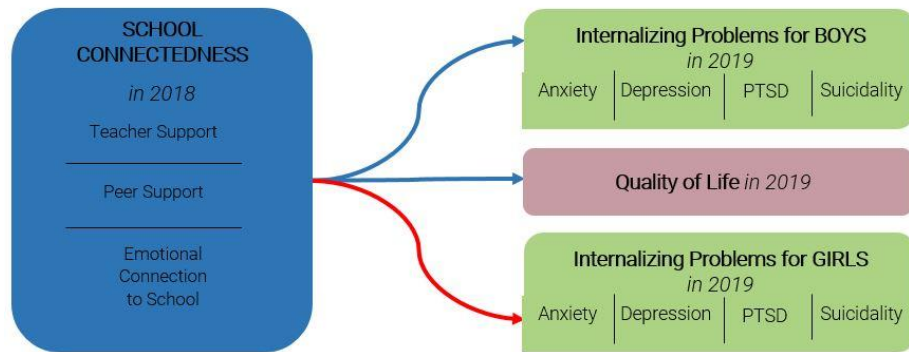
Similar to the previous developmental outcomes, school connectedness had long-term benefits for adolescents' well-being. Specifically, connected adolescents had a better quality of life the next year. The positive influence of school connectedness on quality of life may relate to the fact that school connectedness serves the motivational need to belong²⁶. Satisfying this need is rewarding to adolescents, and consequently, they experience higher well-being. School connectedness had an impact on adolescents' mental health well-being as well; however, the impact of school connectedness on adolescents' emotional well-being is gender-sensitive in so far that they are statistically more significant for either girls or boys. On the one hand, girls with supportive relations with their teachers and peers, and who have an emotional connection to their school experience decreased internalising problems. In other words, positive experiences and supportive school relations protects girls; connected girls are less likely to experience mental health difficulties. Negative emotionality, such as anxiety, depression, and suicidality have severe and negative consequences for the individual, its close social environment, and the society at large. Thus, the findings are important, because overall, girls experience internalising symptoms to a much higher

²⁴ Niehaus, K., Rudasill, K. M., & Rakes, C.R. (2012). A longitudinal study of school connectedness and academic outcomes across sixth grade. *Journal of School Psychology, 50*(4), 443-60.

²⁵ Catalano, R., Haggerty, K., Oesterle, S., Fleming, C., & Hawkins, J. (2004). The importance of bonding to school for healthy development: Findings from the social development research group. *Journal of School Health, 74*, 252-261.

²⁶ Townsend, K. C., & McWhirter, B. T. (2005). Connectedness: A review of the literature with implications for counseling, assessment, and research. *Journal of Counseling and Development, 83*, 191-201.

degree than boys do; for instance, in the present study, the mean score for anxiety in girls was 2,7, whereas the mean score in boys was 1,8. Thus, school connectedness acts as a protective



factor against mental health maladjustment in girls. This finding is significant; it sends the message that efforts to help girls feel that someone cares for them, and supports their emotional needs, has long-lasting effects on their mental health well-being. On the other hand, in boys, school connectedness was predictive of internalising problems one year later.

4.3.4. Conclusions on outcomes of School Connectedness

As shown above, school connectedness is pivotal to numerous beneficial outcomes. In line with global findings, connected adolescents are more likely to have increased life skills. In particular, school connectedness increases adolescents' self-management skills, decision-making skills, cooperation skills, and respect for diversity. Furthermore, school connectedness enhances academic performance and reduces the tendency to consider early school dropout. This may be because connectedness engenders commitment to school life, which in turn improves students' performance and inhibits tendencies to abandon the school community. Furthermore, connectedness increases adolescents' quality of life; in other words, young people who are connected to their school teachers and peers consider this experience to be rewarding, inherently adding quality to their lives.

The importance of the longitudinal design in our analysis cannot be underestimated; the fact that analyses are based on data collected at two time-points adds validity to the conclusions that, indeed, school connectedness is beneficial for adolescent development.

Overall, the results of the longitudinal study of adolescents in Ukraine show that, through school connectedness, the education system can contribute considerably towards the attainment of positive development outcomes for adolescents. This raises the question on how to effectively promote school connectedness. Given the evidence of how it benefits adolescents' adjustment and well-being, most programmatic interventions would focus on the constituent components of school connectedness, i.e. peer support, teacher support and connection to the school. For instance, among the school reforms enforced in schools in Ukraine, one suggestion could be to have classes of a smaller number of students. Personal connections among teachers and students are more to establish in larger classes. Thus, smaller classes would benefit students in establishing more quality relations with their teachers.

To effectively nurture School Connectedness, experts should identify and address the factors which contribute to – or undermine – the experiences of school connectedness.

However, even if it seems that school connectedness interventions would be effective in promoting positive adolescent development, educational experts also need to be mindful of the influencing factors that drive – or undermine – the experience of a connected school. This is important, because even if direct programming for school connectedness is carefully designed and implemented, the desired outcomes may not be achieved. If adolescents face challenges which are not understood and addressed, this would lead to inequalities in developmental outcomes. For instance, a teacher may decide to implement team-oriented activities in the classroom as a means of promoting peer support and connectedness. However, students with unsupportive family environments, might find it difficult to engage effectively with their fellow peers or school teachers. Consequently, adolescents who might be in higher need of the benefits that a positive and supportive school environment can offer, might eventually be left behind. It is for such reasons that school experts should also identify how to nurture the factors which contribute to the experience of school connectedness.

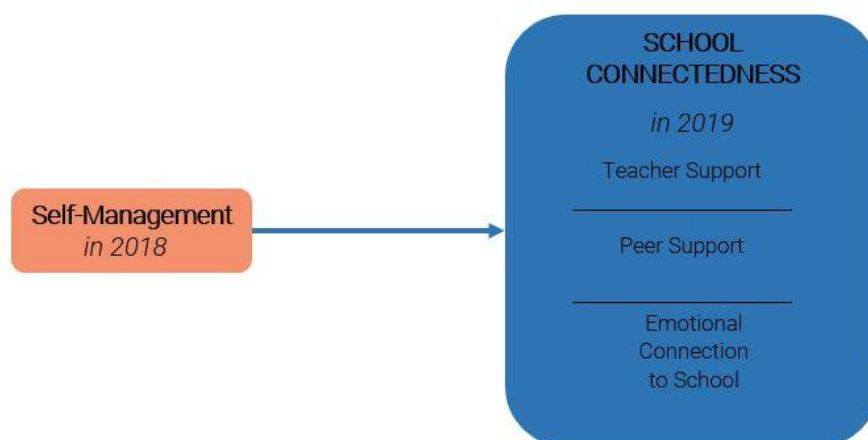
4.4. Drivers of School Connectedness

As demonstrated in section 4.3, School Connectedness plays a pivotal role for adolescents' adjustment and well-being. Considering how connectedness is predictive to a multitude of positive outcomes in young people, educational experts and stakeholders should invest in the design of effective programmatic interventions that aim to enhance experiences of peer support, teacher support, and emotional connection to school. Similarly, for interventions to be successful, experts should, also, identify and work on the influencing factors that drive school connectedness. In other words, they should also identify and address *how* to promote school connectedness.

As we have already mentioned in the introduction section of the report, the contributing factors of school connectedness are multifactorial. Both individual and contextual factors are important in experiences of peer and teacher support, and emotional connection to school. The current study explores the longitudinal determinants of school connectedness. Analyses showed that familial, educational, and other factors enhanced adolescents' future experiences of school connectedness. Specifically:

4.4.1. Life Skills and School Connectedness:

The study results show that self-management skills uniquely contribute to experiences of school connectedness; in other words, adolescents who had high self-management skills (e.g. planning ahead of assignments, and finishing things on time) were able to experience more supportive and high-quality relations with their fellow peers and school teachers one year later. Self-management skills relate to the ability of individuals to take responsibility for their own behaviour and modify it when necessary. Thus, adolescents with self-management skills acknowledge how their



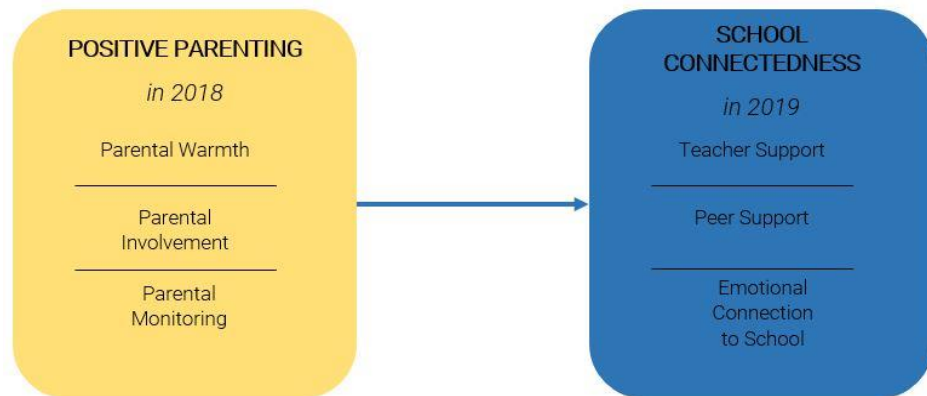
own behaviour might have an effect on the quality of their close social relationships. Identifying how they, themselves, have the power to either enhance or diminish the quality of their close social

relations helps them control or amend their behaviour; as a result, they are able to contribute to high-quality and supportive relations with their teachers and peers.

Additionally, analyses show that the finding is age-sensitive, in that it is noted only in younger adolescents (youngsters aged between 13-15 years old). This means that young adolescents are more receptive to the effects of self-management skills on school connectedness, which suggests that promoting self-management skills need to commence in early adolescence.

4.4.2. Positive Parenting and School Connectedness:

Unsurprisingly, family dynamics were found to play a pivotal role in determining the degree to which adolescents will experience school connectedness in the future or not. Adolescents with warm and involved

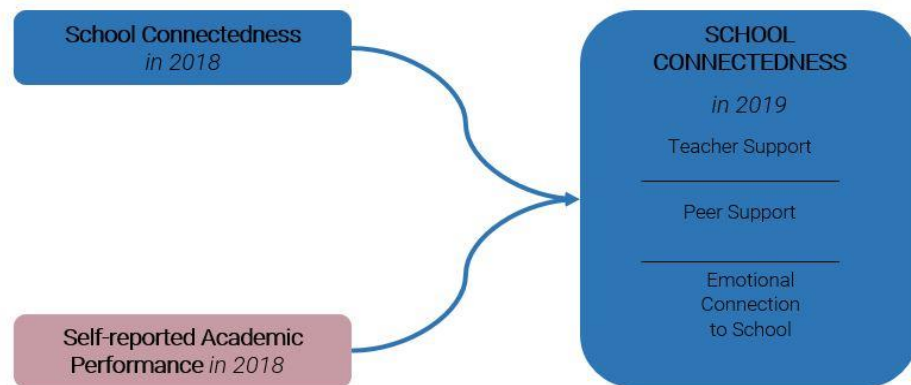


parents experience higher connectedness. Home and school constitute two of the most important microsystems for children and adolescents, and our findings in the current study support the longstanding view that what happens at home transfers to the school environment. When parents are warm, emotionally available, and are interested in what goes on in their child's life, adolescents are more likely to transfer these positive microsystemic experiences into the school context as well. An important finding is that the association between high-quality parenting and school connectedness only applies to younger adolescents. This makes sense; because younger adolescents are at the beginning of their puberty, they still need the guidance and support of their family system in order to develop to well-adjusted individuals who are capable of forming other meaningful and positive relationships. This is not to say, however, that positive parenting practices are unimportant for older adolescents – in their case, adolescents may be abler to differentiate between the two systems, or they may start to distance themselves from their parents in an effort to prepare for adulthood. All in all, our findings in the current study with Ukrainian adolescents how positive parenting has long-lasting positive effects for adolescents. This association is even more pronounced in young adolescents. This has important policy implications for experts working with families. It demonstrates that prevention and intervention programmes need to start early in life. Additionally, it suggests a need to prioritise the family-to-school nexus, for instance through programmatic interventions that strengthen positive parenting practices, to support positive developmental outcomes particularly in young adolescents who are the most receptive to the family-school associations.

The relationship between positive parenting and school connectedness applies only to younger adolescents (13-15 years old).

4.4.3. School-Related Factors and School Connectedness:

Adolescents with high levels of school connectedness also report feelings of connectedness one year later. Although it is not always a prerequisite (Section 4.2.1 illustrates that



average levels of school connectedness can increase to high levels within one year, and vice versa), our findings demonstrate that connectedness is best experienced when students are already emotionally connected to their schools or share positive and supportive relations with their teachers and fellow peers.

Furthermore, analyses showed that academic performance is an essential precondition for adolescents to experience high school connectedness in the future. However, this finding is age and gender-sensitive, in that this relationship applies only in boys and younger adolescents. So even though school connectedness has been found to be an important prerequisite for adolescents' academic achievement (see Section 4.3.2), for younger adolescents and boys, the opposite applies. In essence, getting good grades is an important determinant of how they will feel about their school in the future, or about how supportive they will consider teacher-student and peer-student relations to be. Similar empirical findings were noted in past research, where it was concluded that connectedness was greater among students with better academic performance²⁷.

Academic performance predicts school connectedness, but only in boys and younger adolescents.

Similar empirical findings were noted in past research, where it was concluded that connectedness was greater among students with better academic performance²⁷.

4.4.4. Well-Being and School Connectedness:

The study results show that perceived well-being contributes to long-term experiences of school connectedness; in other words, adolescents who had scored high in quality of life (e.g. feeling calm and relaxed, or having their daily lives filled with things that interest them) experienced more high-quality relations with their fellow peers and school teachers one year later. Interestingly, how one perceives the quality of their life has been found to be both a precursor *and* an outcome of school connectedness. In other words, due to the positive perceptions that adolescents have about their life, they are more likely to transfer these into strong and meaningful social relationships in the school context. Likewise, experiencing school connectedness is rewarding to adolescents, thus becoming more satisfied with their lives.

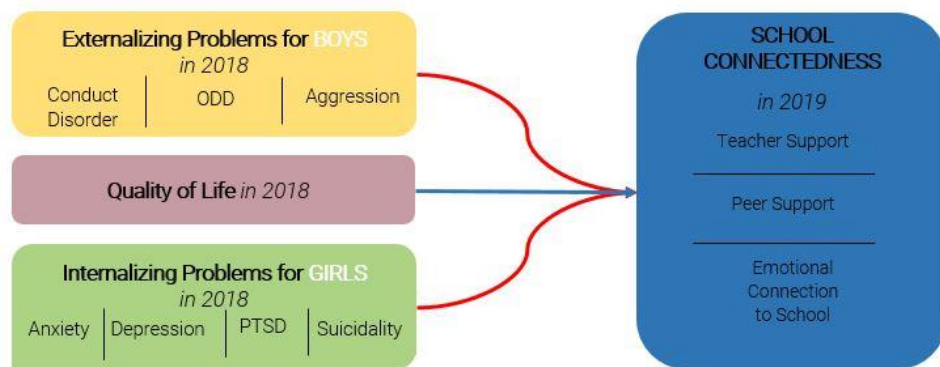
Furthermore, some drivers of school connectedness are gender-sensitive in so far that they are statistically more significant for either boys or girls. Specifically, externalising problems, as indicated through increased aggressive, oppositional, or defiant behaviours, were found to diminish

²⁷ Thompson, D. R., Iachan, R., Overpeck, M., Ross, J. G., Gross, L. A. (2006). School Connectedness in the Health Behavior in School-Aged Children Study: The Role of Student, School, and School Neighborhood Characteristics. *Journal of School Health*, 76(7), 379-386.

experiences of school connectedness but only amongst boys. This shows the active role of boys in influencing the quality of their own close social relationships and experiences. Among the disadvantaging consequences of externalising behaviours is that it has a negative impact on the perpetrators'

social relations. Thus, it makes sense that boys with elevated levels of externalising behaviours would feel more disconnected from their schools. Due to

the nature of these “acting-out” behaviours that boys exhibit – including rule-breaking behaviours, cutting classes or skipping school, arguing with people, difficulty controlling their temper, and hitting people – they ultimately experience negative relationships with their teachers and are often rejected by their fellow peers.



On the other hand, girls who reported enhanced internalising problems during the survey in 2018 experienced lower levels of connectedness one year later. This is an important finding because school connectedness has also been identified as a determinant of mental health well-being. This shows that – in some cases – there are reciprocal associations between youngsters and the environments with which they interact. What this means, is that adolescents with emotional difficulties may be more likely than others to show lower levels of school connectedness; in turn, the lack of positive and supportive relations with their peers and school teacher may contribute to further elevations in negative emotionality.

Externalising behaviours reduces experiences of school connectedness, but only in boys. Likewise, internalising problems are predictive of decreased school connectedness in the future, but only in girls.

Our results show that in promoting experiences of connectedness, there is a need for customised intervention programmes. Programmes need to nurture young girls’ mental health well-being to help them navigate the school context effectively; on the other hand, programmes directed towards boys need to address their enhanced levels of externalising behaviours. One way to do so is through life skills education. Previous empirical evidence shows that adolescents with low externalising problems have high self-management skills, kindness, and respect for diversity. Thus, the work towards building kindness, embracing diversity, and encouraging self-management will eventually contribute to less defiant and aggressive behaviours. Similarly, adolescents with lower internalising problems had higher cooperation, distress tolerance, self-management, and decision-making skills. Thus, to work against anxiety and depression, these four skills should be prioritised²⁸.

²⁸ Symeou, M., Morin, H., Lordos, A., Dryga, A., Fanti, K., Christou, G., Machlouzarides, M., Guest, A., & Lemishka, O. (2020) “The acquisition, development and impact of Life Skills on Ukrainian adolescents”, Ukraine: United Nations Children’s Fund (UNICEF).

4.4.5. Conclusions on drivers of School Connectedness

As already mentioned, in addition to direct programming that aims to enhance school connectedness, school experts and stakeholders also need to be mindful of the influencing factors that enhance or diminish the experience of a connected school. This section should be considered as providing evidence of the important role that multiple factors play in fostering experiences of school connectedness in the long-term. For instance, self-management skills were found to be predictive of experiences of school connectedness. Adolescents with self-management skills are in a better position to consider their own contribution to the quality of their social interactions, as well as, manage their behaviours more efficiently. All these make it more likely for adolescents to form close and supportive relations to others.

Additionally, some age and gender differences were revealed in our findings. For instance, only younger adolescents – aged between 13-15 years old – benefit in the long-term from experiences of positive parenting. In terms of policy design, our findings show that family programmes need to start early in life when adolescents still need the guidance and support of their family system in order to develop to well-adjusted individuals. This doesn't underestimate the relative importance of the family microsystem. Empirical findings have established the contribution of positive parenting for the healthy behavioural and psychosocial development of adolescents. Specifically, adolescents with loving parents, who are adequately involved in their children's lives, are less likely to become either bullies or victims of bullying, experience fewer internalising problems (such as anxiety and depression), and exhibit less negative outward behaviours²⁹. Furthermore, the data highlights substantial gender differences in how some drivers impact school connectedness. Specifically, internalising and externalising behaviours diminish experiences of support but gender differences are revealed in the associations. The findings have important policy implications for experts working with adolescents, and so they should be taken into consideration when designing and implementing relevant prevention and intervention programmes. All in all, it is suggested that stakeholders should invest, among others, in life skills education, since previous findings conclude that life skills, such as self-management skills, respect for diversity, and cooperation skills, are associated to decreased behavioural and mental health challenges.

²⁹ Symeou, M., Sikki, M., Lordos, A., Morin, H., Guest, A., & Dryga, A. (2020) "The role of parenting for adolescents: A report on the significance of parent-adolescent relationships in Ukraine", Ukraine: United Nations Children's Fund (UNICEF).

5. Special Thematic Section

5.1. School Dropout Tendency: An in-depth view

There is an understanding that, for societies to shape their futures based on the Sustainable Development Goals, we need to invest in adolescents. In line with this, education is one very significant investment for children and adolescents. School is one of the most important microsystems in a person's life. School experiences shape young people's personalities and their development. It is so important, that the fourth goal of the Sustainable Development Goals calls to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"³⁰. Yet, thousands of young people decide to drop out of school each year. In Ukraine, until 2013, less than 1% of young people dropped out of school before graduation. However, rates increased considerably after 2014 when the ongoing armed conflict in the eastern part of Ukraine commenced. For instance, the drop-out rate to the last grade of lower secondary general education skyrocketed to 37.6% in 2014, and then dropped to 4.5% in 2015, 1.5% in 2016, and 1.2% in 2017. This is an important issue to address because early school leaving has numerous negative consequences for the individual, their close social environment, and the society at large. It is estimated that a high school dropout will earn in his lifetime approximately 200,000 USD less than a person who completed high school, and almost a million dollars less than a person who has completed college education³¹. Furthermore, it is estimated that people who drop out of school commit about 75% of crimes³².

Previous findings report that determinants of early school leaving are multifactorial. For instance, poor academic performance³³ and low socio-economic status³⁴ are factors found to be predictive of school dropout. Relevant to this, intention to drop out of education was proposed as "the strongest single predictor of dropout"³⁵. However, dropout has been explored as an event happening at a precise point in time, and not something that may develop over time. To this end, the present study explores what predicts school drop-out tendency, which refers to the extent to which a student is inclined to drop-out of school or discontinue their studies. Identifying the factors that contribute to the tendency of young people to consider early school leaving over time is an important first step into designing effective prevention and intervention programmes.

5.2. Associations of School Dropout Tendency

To investigate how school dropout tendency is associated to other factors, Correlation analysis was performed. Findings show that students' tendency to consider dropping out of school associates positively with numerous maladjustment indicators, and negatively with positive social relationships and skills. (see Figure 9). Specifically:

³⁰ UN General Assembly (2015). Transforming our world: the 2030 Agenda for Sustainable Development, A/RES/70/1. Retrieved from: <http://sustainabledevelopment.un.org>

³¹ Cheeseman Day, J., & Newburger, E. C. (2002). "The Big Payoff: Educational Attainment and Synthetic Estimates of Work-Life Earnings." United States Census Bureau. Accessed May 07, 2020, <https://www.census.gov/prod/2002pubs/p23-210.pdf>.

³² Monrad, M. (2007). High School Dropout: A Quick Stats Fact Sheet. Accessed May 07, 2020, <https://eric.ed.gov/?id=ED501066>.

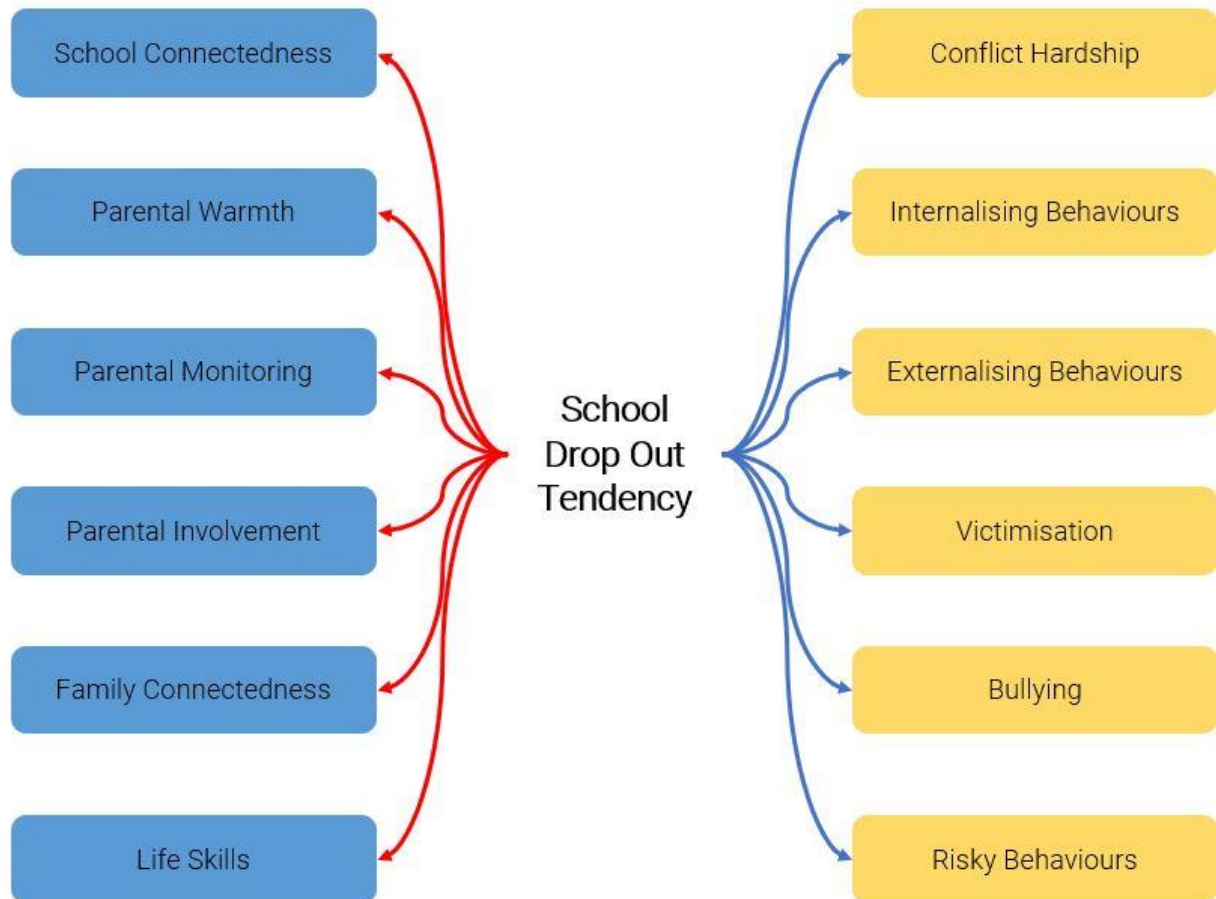
³³ Balfanz, R., Herzog, L., & Mac Iver, D. J. (2007). Preventing student disengagement and keeping students on the graduation path in urban middle-grades schools: early identification and effective interventions. *Educational Psychologist*, 42, 223-235.

³⁴ Dunham, R., & Wilson, G. (2007). Race, within-family social capital, and school dropout: an analysis of Whites, Blacks, Hispanics, and Asians. *Sociological Spectrum*, 27, 207-221.

³⁵ Bean, J. P., & Metzner, B. S. (1985). A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research*, 55, 485-540.

5.2.1. Positive associations

School dropout tendency – which is about adolescents feeling unsure about continuing their studies, often thinking about dropping out of their educational institution, or intending to drop out of their school – is positively associated to conflict hardship, mental health challenges (e.g. anxiety and depression), and unhealthy behavioural problems (e.g. risky behaviours [substance use, unsafe sexual behaviours], externalising problems, and bullying) (see Figure 5). In other words, higher likelihood to consider early school leaving is related to a higher likelihood of being a perpetrator of bullying behaviours or a victim of such behaviours.



5.2.2. Negative associations

School dropout tendency is negatively associated to experiences of school connectedness, parenting factors (e.g. family connectedness, parental monitoring, parental involvement), and life skills acquisition (see Figure 9). In other words, adolescent students who think about or intend to drop out of school also experience less positive familial and school-related relations, and are also less likely to develop important life skills, such as critical thinking skills, distress tolerance, or problem-solving skills.

Overall, findings on Ukrainian adolescents indicate that their likelihood to consider early school leaving has important associations that should not be ignored. Higher tendency to consider dropping out of school is linked to adolescent maladjustments, such as mental health challenges

and risky behaviours, lower levels of life skills, and family and school disconnectedness. To sum up, empirical evidence from previous research findings and current findings demonstrate that:

- Early school leaving has numerous negative consequences, such as higher criminality and economic societal costs. This brings out the need to address and work on the determinants of school dropout so as to eliminate its occurrence.
- School dropout tendency is considered as “the strongest single predictor of dropout”³⁶.
- The tendency to consider dropping out of school is associated to decreased life skills acquisition, school connectedness, and positive parenting. All three are important for the well-being of the adolescent. For instance, school connectedness is an essential prerequisite for academic achievement, for a good quality of life, or for mental health well-being (see Section 4.3.). Likewise, positive parenting and life skills protect young people against negative outcomes (e.g. risky behaviours, internalising behaviours) and promote healthy behavioural, psychosocial, and civic adjustment^{37 38}. With this in mind, it is important to work against school dropout tendency, as it may indirectly contribute to long-term maladjustment for young people.

Despite the very insightful findings regarding school dropout tendency, one imperative question to answer is what exactly drives the development of school dropout tendency? In other words, what contributes to adolescents thinking about or intending to drop out of school? Whereas correlation analysis helps to identify the presence or absence of a relationship between indicators, one of the limitations is that it constricts our ability to explore cause and effect relationships. For instance, despite knowing that school dropout tendency and externalising behaviours are related, it is still uncertain, which is the driver and which is the outcome. The next section aims to investigate what contributes to the development of school dropout tendency. Identifying the drivers is an essential step to designing and implementing effective interventions.

5.3. Drivers of School Dropout Tendency

As demonstrated in section 5.1, school dropouts face numerous negative consequences in their later life. These consequences also negatively affect society at large. The likelihood to consider early school leaving is suggested to be the most important predictor of dropout. Thus, programmatic interventions should work against school dropout tendency. For such programmes to be effective, relevant stakeholders and school experts should first identify the early influencing factors that drive the tendency to consider school dropout.

To test how a different set of factors will have – in the long term – an impact on school dropout tendency, a series of structural equation models (SEM) was performed. Findings suggest that, indeed, to understand and work on the tendency of young people to drop out of school, we need to take into consideration numerous behavioural, familial, and school-related factors.

³⁶ Bean, J. P., & Metzner, B. S. (1985). A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research*, 55, 485-540.

³⁷ Symeou, M., Sikki, M., Lordos, A., Morin, H., Guest, A., & Dryga, A. (2020) “The role of parenting for adolescents: A report on the significance of parent-adolescent relationships in Ukraine”, Ukraine: United Nations Children’s Fund (UNICEF).

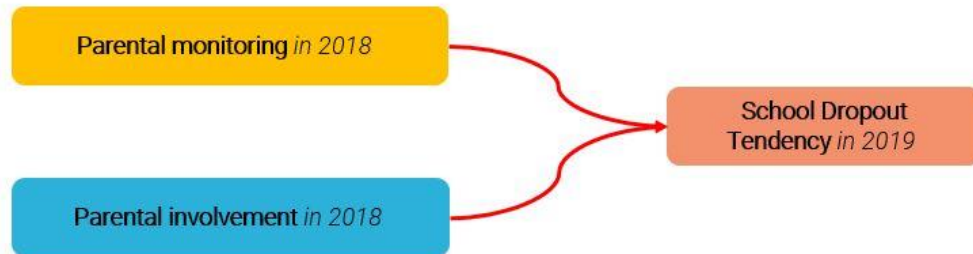
³⁸ Symeou, M., Morin, H., Lordos, A., Dryga, A., Fanti, K., Christou, G., Machlouzarides, M., Guest, A., & Lemishka, O. (2020) “The acquisition, development and impact of Life Skills on Ukrainian adolescents”, Ukraine: United Nations Children’s Fund (UNICEF).

5.3.1. Positive Parenting and School Dropout Tendency:

Positive parenting (for instance parental monitoring of child's behaviour, and parental involvement) is predictive of less likelihood for adolescents to consider early school dropout. In other words, having involved parents who show genuine interest in their child's life, and who monitor their behaviours, whereabouts, and friends, adolescents are able to cope with negativities that may arise in the school context or elsewhere. This eventually contributes to less likelihood for them to consider discontinuing their studies.

Essentially, when adolescents have positive and supportive parents, they

are more likely to trust themselves more, but also to know that they can seek and receive help from their parents when they face challenging situations.



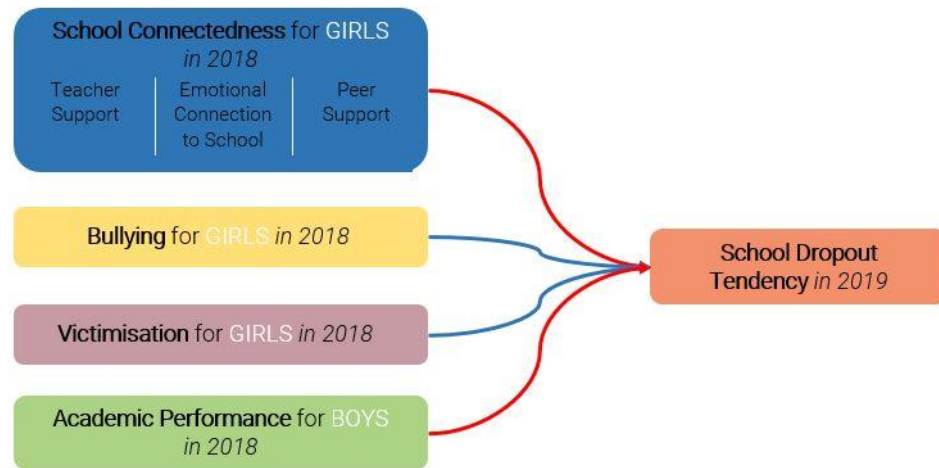
The findings should be considered by education stakeholders when designing prevention and interventions programmes. The family is the most important microsystem, and its positive impact on adolescents' adjustment in the school life is consistently confirmed. Hence, efforts to enhance students' willingness to continue their studies should move beyond the traditional nature of programmatic interventions where the focus is mainly on the school microsystem, and to include parents as well.

5.3.2. School-Related Factors and School Dropout Tendency:

Similar to familial factors, school-related factors are significantly predictive of school dropout tendency. However, gender differences were uncovered, in that associations were found for either girls only or boys only. Specifically, for girls only, experiences of school connectedness reduce the likelihood that they will consider abandoning their studies. A possible explanation for this association is that connectedness engenders commitment to school life and school values, which in turn inhibits tendencies to abandon the school community. Furthermore, teacher and peer support may offer the adolescent not only emotional support but also an opportunity to ask for help. Thus, connected adolescents – even if they experience something traumatic which causes them to consider leaving school – are more likely to disclose this experience and manage to get help; consequently, this will reduce the probability that they would consider discontinuing their studies.

Likewise, for girls, higher bullying behaviours and victimisation are predictive of their tendency in the future to consider abandoning school. This is important because it seems that even if girls reported, overall, lower bullying and victimisation scores than boys did, their significance on school dropout tendency is much stronger. This may be because bullies experience greater disengagement from

school values, which – in the long run – contributes to girls being more likely to consider dropping out. On the other hand, victimised girls experience failure from the education system to



protect them against violence from their peers within the school. Consequently, losing faith in the school system inevitably leads to thoughts on whether continuing attending school is worth it or whether the best choice would be to abandon their studies. The findings have important policy implications; programmatic interventions that aim to reduce dropout rates should be mindful of the significant role the school climate plays and strive towards a safer environment for students.

In contrast, in boys, academic performance contributed to their tendency to consider dropping out of school. This is in line with previous empirical findings, that concluded that poor grades strongly predict dropout in high school³⁹. These gender-disaggregated findings point the way towards gender-sensitive programming. It is proposed that life skills education will be beneficial in mitigating negative behaviours. For instance, in girls, programmes should aim to cultivate cooperation skills, respect for diversity, and distress tolerance skills, which would help mitigate bullying behaviours and victimisation. In contrast, for boys, life skills education should focus on cultivating cooperation skills, critical thinking skills, and self-management skills.

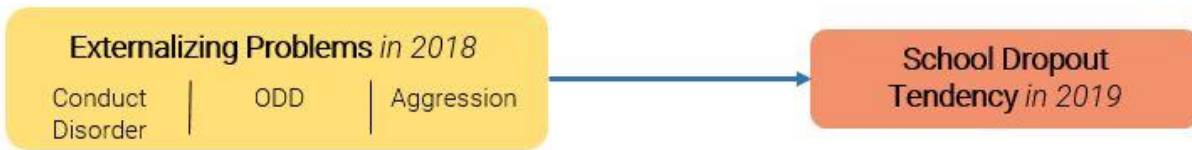
5.3.3. Behavioural Challenges and School Dropout Tendency:

Externalising problems is an umbrella term that incorporates conduct problems, oppositional defiant behaviours, and aggressiveness. Adolescents who engage in externalising behaviours are more likely than others to cut classes and skip school, to break the rules at school or at home, to argue with adults, and to have difficulty controlling their temper.

Similar to other negative behaviours (e.g. bullying), externalising behaviours are predictive of greater likelihood one year later to consider school dropout. In other words, students who “act-out” against their social environment have higher chances of considering discontinuing their studies at some point in the future. Externalising behaviours disturbs social order, but those who engage in externalising outbursts also experience social relations of poorer quality and a general disconnection from their social surroundings. Hence, the negative social relations that they form as

³⁹ Mac Iver, M. A. (2010). *Gradual disengagement: A portrait of the 2008–2009 dropouts in the Baltimore City Schools*. Baltimore, MD: Baltimore Education Research Consortium. Retrieved from http://www.acy.org/upimages/Gradual_Disengagement.pdf

a result of their behaviours, along with the overall disconnection that they feel towards their school makes it highly likely to consider leaving school.



5.4. Conclusions on School Dropout Tendency

Early school leaving is associated to an array of future challenges. People who drop out of high school are more likely in the future to be unemployed or earn lower wages, to require public assistance, become single parents, and have children at a younger age⁴⁰. In the present study, the tendency to consider school dropout associates to numerous challenging experiences, such as risky behaviours, internalising symptomatology, or bullying and victimisation. Simultaneously, higher school dropout tendency is associated to lower levels of school and family connectedness, life skills acquisition, and positive parenting indicators.

Section 5.3. explored and concluded that determinants of school dropout tendency are multifactorial. This finding is very important and should not be ignored; as already mentioned, school dropout has numerous severe consequences for the individual and the society at large. Since intention to abandon school is considered the most important predictor of actual dropout, then efforts to diminish the phenomenon should become a priority. The present section discusses how connected adolescents are less likely to want to drop out of school. Furthermore, the findings in the current study confirm how important having parents who display positive parenting practices are. Involved parents who monitor their child's behaviours play an essential role in the healthy educational adjustment of adolescents, as indicated through the inverse relationship to school dropout tendency. On the other hand, externalising behaviours are linked to an increased likelihood to consider early school dropout. Furthermore, some drivers of school dropout tendency are gender-specific for they are statistically significant for either only boys or only girls.

School dropout has become a reality for numerous adolescents. Subsequently, understanding the mechanisms through which the phenomenon can be lessened is crucial. Our analyses provide support for the need to include parents in specific programmatic interventions tailored to the reality of the Ukrainian context. The findings also suggest the need to increase gender sensitivity programming. Life skills education is proposed as a means of addressing bullying incidents, victimisation experiences, and improving academic performance. For instance, in working towards reducing bullying behaviours, respect for diversity should be promoted; on the other hand, to improve academic achievement, critical thinking skills and self-management should be highly encouraged. Furthermore, the education sector should work towards creating school environments where diversity is respected and encouraged, and students feel safe to express themselves.

⁴⁰ Monrad, M. (2007). High School Dropout: A Quick Stats Fact Sheet. Accessed May 07, 2020, <https://eric.ed.gov/?id=ED501066>.

6. Summary of Main Findings

The study investigated the long-term impact and predictors of school connectedness. Then, the study sought to explore school dropout tendency, which refers to the extent to which a student is inclined to consider to drop-out a school or discontinue their studies. The main findings of the study are identified below:

1. Customised programmes should be applied when necessary. In Ukraine, our current findings suggest that **more attention should be given in enhancing teacher support**. Consequently, teacher re-education might be a necessary step to achieving increased levels of school connectedness.
2. Regarding school connectedness and its association to well-being, our findings support the **“more is better”** notion. Long-term experiences of school connectedness are associated to numerous adjustment indicators, such as higher quality of life, positive self-esteem, and life satisfaction. They are more likely to have high levels of life skills, experience academic achievement, and have more positive social relationships.
3. **Experience of school connectedness was found to be associated with several developmental outcomes longitudinally**, such as enhanced life skills (specifically, self-management skills, decision making, respect for diversity, and cooperation skills), enhanced academic performance, increased quality of life, reduced school drop-out tendency, and reduced internalising problems.
4. **Factors that can contribute to experiencing school connectedness were identified in the study** at the individual level (self-management skills) and at the contextual level (positive parenting and connectedness at school are strongly associated with experiencing connectedness one year later). Quality of life is also longitudinally associated to experiences of school connectedness.
5. **Some drivers of school connectedness are gender-sensitive**; for instance, externalising behaviours lowers connectedness, but only in boys. Similarly, internalising behaviours also reduces experiences of connectedness, but only in girls.
6. In exploring school dropout tendency in greater detail, **several factors which are associated to students’ tendency to consider early school leaving were identified**. Increased externalising problems and low levels of parental monitoring and parental involvement were strongly predictive of a higher tendency to drop out of school one year later. School-related factors are longitudinally predictive of reduced school dropout tendency; however, gender differences were uncovered in the findings. For instance, bullying and victimisation were associated to school dropout tendency, but only in girls; in other words, girls who bully others are more likely to consider or intend to abandon their studies, but boys who bully others do not consider school leaving.

7. Recommendations and Conclusions

Schools constitute one of the most important microsystems in a person's life; schools not only help young people become literate; they also indirectly teach social skills and proper behaviour, to think critically and make decisions, and to become productive citizens of society. Hence, the ultimate goal of governments across the world should be to strive towards an education system which ensures that its students receive high-quality education that will provide them with the necessary conditions for a balanced and positive future. The current study, which is based on longitudinal analyses of our data, confirm that, indeed, school is an important mean of becoming an adjusted person in the long term. Even though our findings are Ukraine-specific, nevertheless, they are in line with the findings of past research from worldwide. Consequently, though they *can* be generalised to the adolescent population of Ukraine, they should not be considered as exclusive only to this context. School connectedness benefits students in all over the world – the United Kingdom, Germany, Italy, Spain, Russia, the United States of America, and so on. Some recommendations that can be drawn from the study's findings include:

1. The Ministry of Education and Science of Ukraine, as well as educational stakeholders and policy-makers, should consider school connectedness as a holistic approach to adolescent development; all three constituent elements – peer support, teacher support, and emotional connection to school – are necessary for adolescents' positive adjustment.
2. Where necessary, programmes should be customised to the specific needs of the time. At present, it seems that in Ukraine, efforts should direct towards enhancing teacher support.
3. School connectedness can and should be enhanced through direct programming. Nonetheless, stakeholders and education experts who design and implement programmes should be mindful of the factors that enhance experiences of connectedness and work towards them. Likewise, efforts should be made to work against any factors that diminish school connectedness. For instance, it is proposed that:
 - a. Programmatic interventions should prioritise the family-to-school nexus and move past the traditional, yet passive, family-school relationship.
 - b. To increase teacher support *and* enhance students' academic achievement, use interactive/experiential learning, as well as a range of teaching methods that will allow students to develop and advance their critical thinking skills, problem-solving and decision-making skills, and co-operation skills.
 - c. Prioritise and incorporate life skills education in the curriculum. For example, girls who suffer from internalising symptoms will ultimately experience less connectedness in the school context. We know from past research that cooperation, distress tolerance, self-management, and decision making mitigate internalising symptomatology. Accordingly, life skills education is expected to encourage the mental health well-being of girls, and consequently, their experiences of school connectedness.
4. School drop-out brings about numerous negative consequences for the individual, their close social environment, and the society at large. Hence, addressing the issue of school drop-out is a priority. Along with life skills education, programmatic interventions should aim towards creating a safe and positive school environment for young people, where incidents of bullying or aggression are not tolerated, where students feel respected, and diversity is celebrated and encouraged.

School connectedness is significant, not only for the short term but – as our present study demonstrates – for the long term as well. Undoubtedly, school connectedness has numerous immediate benefits, such as increased interest in academic affairs and academic performance, decreased levels of bullying incidents, and positive emotionality. Importantly though, school connectedness is also a significant means of establishing long-term and long-lasting positive

outcomes. Our longitudinal study of Ukrainian adolescents shows that – in the long term – connected adolescents will show, among others, greater academic achievement, they will be better equipped to deal with the demands of everyday life as indicated through their higher levels in life skills, and will experience a more positive quality of life.

Appendix: Glossary of Adolescent Component indicators

Indicator	Indicator Description
Academic performance	Self-reported evaluation of one's school performance.
Aggression	Extent to which one is aggressive in daily life, such as frequently getting into fights and confrontations.
Anxiety	Degree to which one feels anxious and insecure to an extent that the person finds it hard to stop worrying and relax.
Bullying	Exposure – repeated over a period – to negative behaviour by one or other persons including in person or online harassment and physical violence.
Competency-Based Teaching	Policy measures that ensure that teaching is of high quality (e.g., promoting critical thinking and problem-solving skills).
Conduct Disorder	The display of disruptive and violent behaviours and, difficulty in following rules.
Conflict Hardship	Encapsulates the notion that the adolescent and his or her family has experienced direct personal loss as a result of conflict.
Cooperation Skills	The ability to work together with other people.
Critical Thinking Skills	The ability to think rationally and objectively about different matters, and to weigh different options and ideas.
Decision-Making Skills	Includes analytical thinking, making judgements, and being able to evaluate evidence, claims, and beliefs ⁴¹ .
Depression	Degree to which one feels depressed or very sad.
Distress Tolerance	The ability to cope and withstand difficult and negative situations without breaking down emotionally.
Emotional connection to school	Degree to which one is emotionally invested in their school.
Exposure to Conflict	Degree to which one feels exposed to the conflict through being close to regions that are subject to shelling, having family members participating in the conflict, or experiencing family division because of the conflict.

⁴¹ Reimagining Life Skills and Citizenship Education in the Middle East and North Africa: A Four-Dimensional and Systems Approach to 21st Century Skills Life Skills - Conceptual and Programmatic Framework (UNICEF, 2017)

Expressive Communication One's ability to communicate and exchange ideas in an efficient and adaptive manner.

Family Connectedness Degree to which one experiences a mutual emotional bond with their family members.

Gratitude A general state of thankfulness and/or appreciation.

Inter-Generational Partnership The ability to appreciate the contributions of people in society regardless of their age.

Kindness Being genuinely interested in helping and caring for other people, and doing good deeds.

Leadership The ability to guide and direct a group people/a situation.

Life Satisfaction The degree to which a person feels satisfied with his/her life overall.

Life Skills Abilities that enable individuals to deal effectively with the demands and challenges of everyday life, including problem-solving skills, critical thinking skills, and co-operation skills.

Oppositional Defiant Disorder A type of behaviour disorder, where children and adolescents are characterised by defiance and hostility.

Parental Involvement Parental involvement refers to the amount of participation and connection a parent has when it comes to a child's social and academic life.

Parental Monitoring Refers to parents being aware and supervising their adolescents' activities (at school, at home, with friends and peers) and communicating their concerns to their adolescent child.

Parental Warmth Parental warmth is about parents providing their adolescents with regular support, speaking to them in a positive and friendly manner.

Problem-Solving Skills The ability to "think through steps that lead from a given state of affairs to a desired goal"⁴².

Quality of life The way a person evaluates different aspects of his/her life in terms of mood, relations with others, and goals and the degree to which a person feels satisfied with his/her life.

Readiness for non-violent civic engagement Willingness to engage in civic and political matters using non-violent means, and to participate in local youth initiatives to play a role in public affairs relevant to one's interests such as youth councils.

⁴² Barbey, A., & Baralou, L. (2009). Reasoning and Problem Solving: Models. *Encyclopedia of Neuroscience*, 8, 35-43.

Respect for Diversity

Appreciating and accepting the uniqueness and differences of different people.

Safe Physical School Environment

Policy measures that ensure that students experience physical safety at their school (e.g., healthy and nutritious meals, clean and adequately equipped restrooms).

Safe Psychosocial School Environment

Policy measures that promote a school environment that is psychosocially safe to students, including having available psychosocial support for students, or applying anti-violence campaigns.

School Connectedness

The extent to which one feels connected to peers and teachers in the school context.

School Dropout Tendency

The extent to which one is inclined to consider to drop-out a school or discontinue their studies.

Self-Esteem

Refers to a person's sense of self-worth.

Self-Harm

Thoughts of and attempts to injure oneself.

Self-Management Skills

The ability of a person to regulate and control their lives.

Substance Use

Frequency of tobacco, alcohol or drug use.

Teacher Support

The amount of help, concern and friendship the teacher directs toward the students.

Unsafe Sexual Behaviour

Inclination to engage in unprotected sex with multiple partners.

Victimisation

Directly experiencing bullying in the form of repeated physical, verbal or psychological attack or intimidation that is intended to cause fear, distress, or harm.

Composite Indicators**Bullying**

Includes Physical, Relational, Verbal and Cyber bullying.

Externalising problems

Includes Aggression, Conduct Disorder, and Oppositional Defiant Disorder.

Internalising problems

Includes Anxiety, Depression, PTSD, Self-harm & suicidality.

Life Skills

Includes Respect for Diversity, Kindness, Expressive Communication, Receptive Communication, Cooperation, Negotiation, Problem-Solving, Decision Making, Critical Thinking, Distress Tolerance, Self-Management, and Creativity

Risky behaviours

Includes substance abuse, unsafe sexual behaviours, and self-harm.

Victimisation

Includes Physical, Relational, Verbal and Cyber victimisation.

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