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Ukraine

ADOLESCENTS AND SCHOOL CONNECTEDNESS:

How peer and teacher support, and emotional connection to school influence Ukrainian adolescents

Acknowledgements

AUTHORS

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Glossary

ESPAD	European School Survey Project on Alcohol and Other Drugs
GCA	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
SCORE	Social Cohesion and Reconciliation Index
SeeD	Centre for Sustainable Peace and Democratic Development
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

CONTENTS

KEY TERMS AND DEFINITIONS

Adolescents: the term adolescents in UNICEF is used for young people aged 10 to 18 years. However, the vast majority of adolescents that participated in the study were aged between 12 and 19.

Areas near the conflict line: the study defines areas near the conflict line 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.

Behaviour problems: externalising problems are defined in this study as aggression, conduct disorder (CD), and oppositional defiant disorder (ODD).

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.

Risky behaviours: risky behaviours in this study are defined as substance use, self-harm, and unsafe sexual behaviours.

School Connectedness: In this study, the concept includes a sense of emotional connection to school, 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.

"Safe Schools": a concept containing all the necessary conditions for adolescents' health, social, and academic development. In our study, the "Safe Schools" standards include: safe physical school environment, safe psychosocial school environment, competency-based teaching, and participatory and inclusive governance.

"Safe Schools" Standards: Are defined as the unique elements of the "Safe Schools" programme that are essential to creating a safe and child-friendly school.

1. EXECUTIVE SUMMARY

The present study aims to provide insights on how adolescents in Ukraine experience school connectedness, and the importance of school connectedness for adolescents' well-being. To achieve these aims, the Centre for Sustainable Peace and Democratic Development (SeeD) collaborated with the United Nations Children's Fund (UNICEF) to implement a large-scale quantitative study across Ukraine. The sample consisted of 7,846 adolescents from 200 educational institutions in 8 oblasts in Ukraine: Dnipropetrovsk, Zaporizhia, Kharkiv, Mykolaiv, Lviv, Kyiv, and the government-controlled Donetsk and Luhansk oblasts.

The study first investigates the contribution of school connectedness on adolescent development. The results show that by nurturing school connectedness, the education system can be an important determinant of positive developmental outcomes. Specifically, school connectedness is predictive of a wide range of positive adjustment indicators, such as readiness for civic participation, enhanced academic performance[1], and higher life satisfaction. School connectedness is also associated with reduced internalising problems and risky behaviours, such as anxiety, depression, substance use, and self-harm. Furthermore, school connectedness decreases the likelihood that adolescent students will be involved in bullying incidents either as the aggressors or as victims. Overall, connected adolescents are more satisfied with their lives, as indicated through their academic performance, quality of life, and healthier progression to the macrosystem. Undeniably, school connectedness constitutes a determining factor that – when nurtured – can pave the way to adolescents' behavioural and emotional well-being.

Then, the study sought to explore the levels of school connectedness and found that, across Ukraine, adolescents experience higher levels of peer support, followed by an emotional connection to school, and lastly, teacher support. These findings support the ongoing education reform, where enhancing teacher support constitutes a national priority.

The study also identifies school-related factors that contribute to experiences of school connectedness. Specifically, the study found that the four elements which contribute to a safe and positive school climate – safe physical school environment, safe psychosocial school environment, competency-based teaching, and participatory and inclusive governance – predict increased levels of school connectedness in general with particular increase in perceived levels of peer support, teacher support, and emotional connection to school. Competency-based teaching and participatory and inclusive governance, in particular, came out as the most critical drivers of experiences of school connectedness. When designing programmatic interventions to enhance school connectedness, these findings should be considered and, elements which enhance experiences of school connectedness should be prioritised accordingly. Even though our analyses also explore gender and regional differences, our results do not show any distinctions between them. In other words, both boys and girls across Ukraine benefit from those school policies, which increase adolescents' experience of school connectedness. Consequently, intervention programmes following the "one size fits all" rule can still expect to benefit all adolescents irrespective of their gender or region of residence.

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

2. INTRODUCTION

2.1. Background: the need for connectedness

As societies strive to shape their futures based on the Sustainable Development Goals, there is a growing recognition that investing in adolescents is the key to success. Adolescence, though, is a turbulent period in life: the young person experiences numerous physical, behavioural, and mental changes, and an increased need for independence. However, even if autonomy is a priority for them, adolescents still need the care of adults, as well as a supportive environment that will pave the way for adolescents to reach their full potential. Failure to do so brings about behavioural and psychosocial challenges. For example, the unresolved conflict in eastern Ukraine is a "plague" that threatens the well-being of 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. One large-scale study in eastern Ukraine, conducted by the Centre for Sustainable Peace and Democratic Development (SeeD) in collaboration with UNICEF, examined the interaction between individual, microsystemic, and macrosystemic factors and their impact on adolescent development outcomes, all within the context of the current conflict. The results of the study indicated that conflict exposure was associated with increased behaviour problems (e.g. delinquency, substance use, and risky sexual behaviour), internalising symptomatology (e.g. anxiety, depression, and self-harm), and an overall reduction in well-being[2]. In turn, behaviour problems impaired academic performance and adolescents' willingness for non-violent civic participation, while they increased tendencies to consider dropping out of school and bullying behaviours. Similarly, internalising behaviours significantly reduced the emotional well-being of adolescents but increased the likelihood of self-harm and suicidality[3].

An adjusted individual is one who acts in culturally acceptable ways. Therefore, he must be taught the rules of conduct, as well as assumptions on what is expected of him about future behaviour. School connectedness, which is defined in the literature as "the belief by students that adults and peers in the school care about their learning as well as about them as individuals"[4], constitutes a major factor that can help adolescents shape their futures. On that account, the focus of the present report is on the role of the education system as measured through School Connectedness. The education system is fundamental both for the individual and the society. Its role is not only to educate students; instead, the social functions of education include, among others, socialisation and social integration. Through schools, adolescents learn the social conventions underlying friendships and other relationships. Studying the impact of school connectedness is critical, but also significant is the investigation of how school policies can impact on school connectedness.

The importance of school connectedness is supported by established theories of social connectedness. For instance, a sense of belongingness is not only desired but needed as well[5]; it is an inherent and fundamental human need, motivating individuals to develop social bonds. Thus, less connected individuals will suffer from numerous adverse outcomes, such as health issues and behavioural and psychosocial challenges. In this respect, school connectedness relates to a basic need to belong, and its presence or absence would affect human development. It is a multidimensional construct that consists of emotional connection to the school, teacher support, and peer support. All three measure the health of various types of networks that typically operate within the school. Emotional connection to school has to do with how positive students feel about school, so emotionally connected adolescents experience a strong bond and are emotionally invested in their schools. On the other hand, teacher support and peer support have to do with the quality of students' relations with their teachers and peers. Specifically, teacher support refers to adolescents' perceptions of the amount of care, concern, and encouragement their teacher directs toward them. Similarly, peer connectedness involves adolescents being connected to their peers and receiving the comfort and support they need. As we would expect, school connectedness has significant implications for adolescents' behaviours. Academically, sharing positive relations with teachers

2. 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).
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.
5. Baumeister, R., & Leary, M. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. Psychological Bulletin, 117, 497–529.

and being emotionally more connected to schools enhances academic success[6], but also decreases school drop-out tendencies[7]. Additionally, deficits in school connectedness were also linked with the exhibition of both behaviour problems[8], and more severe emotional and mental health problems, such as depression and suicidal ideation[9]. All in all, empirical findings suggest that nurturing school connectedness will have positive and long-lasting positive outcomes.

School connectedness was explored in the context of eastern Ukraine in 2017, in the study conducted by the Centre for Sustainable Peace and Democratic Development (SeeD) in collaboration with UNICEF. In essence, the 2017 eastern Ukraine adolescent study is based on the analysis of data collected in the first planned wave of the USE adolescent component survey. Findings show that school connectedness contributes to adolescents' positive developmental outcomes (for a detailed review of the findings, please read UNICEF's report)[10]. In line with global findings, connected adolescents adjust better in different sectors of their lives, including the academic sector, the mental health sector, and the civic sector. Specifically, high levels of school connectedness were predictive of a wide range of positive outcomes, such as academic performance, readiness for non-violent civic participation, and overall life satisfaction. Furthermore, school connectedness also mitigated detrimental outcomes, including becoming a perpetrator of bullying or experiencing internalising and externalising problems. Overall, findings from the first wave of data conclude that through school connectedness, the education system can 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. So, in nurturing school connectedness, the school environment is an important determinant[11]. According to UNICEF, school safety includes prevention of, preparedness for and, when necessary, recovery from all such threats to children's lives and well-being, whether they occur at school or on the way to and from school[12]. For instance, "Safe schools" is a programme that is currently being implemented in the Donetsk and Luhansk oblasts in Ukraine, and as a programme, it encompasses all the necessary conditions for adolescents' health, social, and academic development. Such conditions include being in a safe and healthy school environment, as well as experiencing a supportive psychosocial school climate, which both enhance school connectedness[13]. To be in a favourable physical school environment means that the school-related areas (e.g. schoolyard) are safe for students, there are safety-approved playgrounds or adequate first-aid facilities and that schools provide students with high-quality and nutritious meals.

Similarly, the psychosocial school climate is influenced by factors such as, among others, having established set rules and guidelines, or being aware of the consequences for misbehaviours. Also important is to have clear policies related to the prevention and intervention of issues like bullying, and the provision of extracurricular activities and psychosocial care for adolescents who experience any crisis. Other aspects of a positive school environment include perceptions of competency-based teaching and inclusive and participatory school governance. Competency-based teaching is about considering the teaching methods to be high quality, whereas the latter is defined as a school culture where students, teachers, school personnel, and parents are all involved in the management of the school. Indeed, research demonstrates that students' participation in extracurricular activities during or after school hours is linked to higher levels of school connectedness[14]. Also, having clear and consistent rules on what is expected from students is also associated to school connectedness. Schools that promote mutual respect in the classroom develop higher levels of connectedness because students are freed from concern about being ridiculed or teased[15].

Nonetheless, the overall quality of school environment is not only influential in nurturing school connectedness, but it affects other aspects of adolescent development as well, such as depression[16] and civic engagement[17]:

6. Crosnoe, R., Johnson, M., & Elder, G. (2004). Intergenerational bonding in school: The behavioural and contextual correlates of student–teacher relationships. Sociology of Education, 77, 60–81.
7. 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
8. Loukas, A., Ripperger-Suhler, K., & Horton, K. (2009). Examining temporal associations between school connectedness and early adolescent adjustment. Journal of Youth and Adolescence, 38, 804–812.
9. Millings, A., Buck, R., Montgomery, A., Spears, M., & Stallard, P. (2012). School connectedness, peer attachment, and self-esteem as predictors of adolescent depression. Journal of Adolescence, 35, 1061–1067.
10. 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).
11. Centers for Disease Control and Prevention. (2001). School health guidelines to prevent unintentional injuries and violence. MMWR, 50(22), 1-73.
12. UNICEF, Safe Schools in Ukraine: A Concept Note for the Ministry of Education and Science, 2016.
13. 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.
14. Blum, R. W., McNeely, C. A., & Rinehart, P. M. (2002). Improving the odds: The untapped power of school s to improve the health of teens. Minneapolis, MN: Center for Adolescent Health and Development, University of Minnesota.
15. 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.
16. Shochet, I. M., & Smith, C. L. (2014). A prospective study investigating the links among classroom environment, school connectedness, and depressive symptoms in adolescents. Psychology in the Schools, 51(5), 480-492.
17. Flanagan, C. A., Stoppa, T., Syvertsen, A. K., & Stout, M. (2010). Schools and social trust. In L. Sherrod, J. Torney Purta, & C. Flanagan (Eds.), Handbook of research on civic engagement in youth (pp. 307–330). Hoboken, NJ: Wiley and Sons.

The adolescent study aims to provide insight into the experiences of school connectedness among Ukrainian adolescents, and the significance of connectedness for positive behavioural and psychosocial adaptation. Even though we have evidence that school connectedness predicts adolescents' well-being in the Donetsk and Luhansk oblasts, the aim here is to investigate how important the education system is across Ukraine. Furthermore, the study aims to measure the relative contribution of school policies on nurturing school connectedness. Specifically, the study aims to answer the following research questions:

1. How does school connectedness affect key outcomes?

2. What are the levels of key indicators which measure connectedness (peer support, teacher support, emotional connection to school, and family connectedness)?

3. How do school policies affect 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 of three planned waves of the USE adolescent component survey. The first data collection took place in 2017, and the sample consisted of 3,311 adolescents (aged 13-17 years old) living in the government-controlled areas of Donetsk and Luhansk oblasts. Due to the growing interest in exploring how school connectedness is experienced across Ukraine, in the second wave of data collection, 7,846 Ukrainian adolescents participated in the study through self-report questionnaires. Adolescents were recruited from 200 educational institutions from 8 oblasts in Ukraine: Donetsk, Luhansk, Dnipropetrovsk, Zaporizhia, Kharkiv, Mykolaiv, Lviv, and Kyiv oblasts. The study aims to provide insight into the experiences of school connectedness among Ukrainian adolescents and the significance of school policies in nurturing connectedness. Considering that the four school policies included in the current study are also the four school standards that conceptualize the "Safe Schools" programme in Ukraine, findings will, in turn, inform government institutions and other key stakeholders on the relevance of encouraging healthy social networks among adolescents and a safe and stimulating school environment.

Findings which respond to each of the research questions will then inform key education stakeholders on the tailoring of interventions and will establish the importance of social networks in adolescents. This report will shed light onto which regions or demographic groups experience low levels of connectedness, allowing key policy and experts to focus on addressing those groups' challenges in developing social connectedness. The study will also highlight which factors contribute to the development of connectedness by investigating its association with a number of school policies, such as safe psychosocial school environment and competency-based teaching.

3. METHODOLOGY

The measures complied with UNICEF's and national ethical considerations on conducting research using children. For the data collection process, a modified version of the first wave questionnaire was created. 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 questionnaire of the second wave of Ukrainian study on adolescence. Indicators range from adolescents' experiences in the school setting, such as teacher support, peer support, and emotional connection to schools (see Figure 1), to school drop-out tendency, externalising and internalising behaviours (e.g. conduct disorder, aggression, anxiety, and depression), and risky behaviours (e.g. substance use, unsafe sexual behaviours, and self-harm).

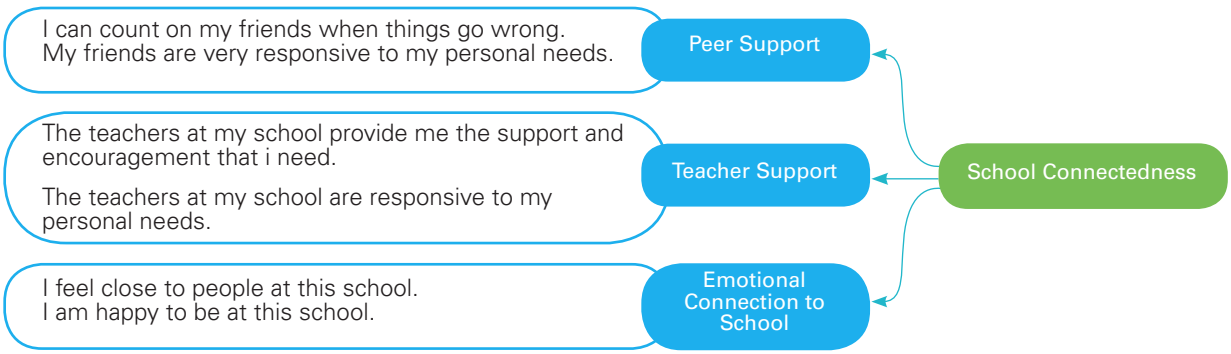
Furthermore, several new indicators were added in the questionnaire to gain a more comprehensive, detailed, and precise understanding of how school connectedness is experienced by adolescents. New additions included questions on school policies, such as safe psychosocial school environment, and participatory and inclusive governance, and include items such as: "Our school has an active anti-violence campaign and has clear mechanisms how to react to cases of bullying and violence", and "There are effective student governance bodies in my school (such as student council, head of class, class students committee) which genuinely represent the needs and interests of the student community". 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 (please see below). Likewise, to measure, for example, safe psychosocial school environment – which is a school policy – five items were designed; adolescents were asked to indicate, among other questions, whether their school (i) applies anti-violence campaigns or has guidelines on how to deal with incidents of bullying, and (ii) offers students extra-curricular activities. 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 model



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 Yaremenko[18] (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 wave 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 Drugs[19] (ESPAD) and leads Ukraine's data collection for the Health and Behaviour in School-aged Children[20] (HBSC), both cross-national studies taking place in 35 and 48 countries respectively. UISR carried out an initial independent ethical review of the questionnaire developed by the research team following which the questionnaire was revised before being pilot tested in students in Bila Tserkov. 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 Ukraine[21]. Before administering the paper-based questionnaire, regional field managers from the UISR National network received a full-day training. Students were then informed about the objectives of the study, how the data would be used and informed that participation was on a voluntary basis, that not all the questions needed to be answered and 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.

18. http://www.uisr.org.ua/
19. http://www.espad.org
20. http://www.hbsc.org
21. http://www.mon.gov.ua/

3.3. Data collection and analysis

The adolescent data was collected through a paper-and-pencil self-report questionnaire in the Ukrainian language during the first semester of the 2018-2019 school-year (October to early December). The sample consisted of 7,846 adolescents aged between 12-19 years old (mean age = 15.46 years). Both genders were represented in the sample (see Figure 2). Boys represented 46.3 per cent of the sample (3,634 males), girls represented 53.5% (4,197 females), and a further .2% (15 adolescents) did not provide their gender information.

Adolescents were students from 200 education institutions in Ukraine who resided in the Donetsk, Luhansk, Dnipropetrovsk, Zaporizhia, Kharkiv, Mykolaiv, Lviv, and Kyiv oblasts. For the Donetsk and Luhansk regions, a 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.

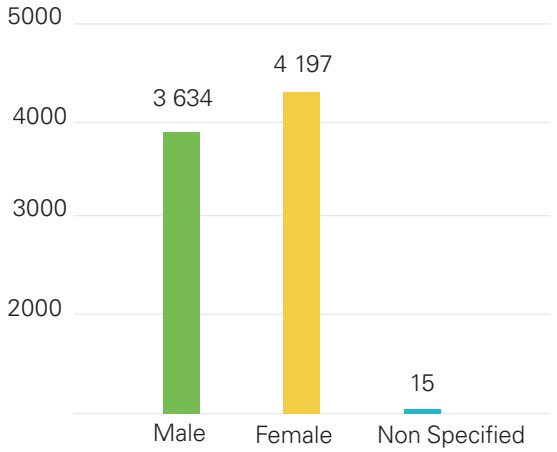
The raw data was processed to form composite scales (or indicators), the validity of which was confirmed using factor analysis and reliability analysis. On confirmation of these scales working as coherent measures, a mean score was calculated for each indicator. Then the scores were disaggregated by age, gender, oblast and contact line proximity.

To investigate the underlying dynamics and gain actionable insights into the processes which drive School Connectedness (and other desirable outcomes), predictive statistical modelling was used. To investigate the outcomes of School Connectedness, Structural Equation Modelling (SEM) was used to explore how School Connectedness predicts outcomes of development – including in learning, civic and psychosocial domains. The structural equation model in this section of the report was comparable to the model that was used in the previous School Connectedness report – published in 2019, allowing for confirmation of the previous findings. The role of school policies was investigated by using SEM to determine how each policy (measured by distinct indicators) influences School Connectedness. The predictive model was disaggregated for demographic subgroups and any differences in the pathways for different groups were reported.

To determine the components of School Connectedness which require programmatic focus, frequency analyses were used to compare which indicators of school connectedness were observed the most across the sample. To obtain an oblast or school-specific understanding of the levels of each indicator, the frequency analyses were disaggregated at oblast and school level. The disaggregation was also carried out for key demographic subgroups as described above.

Figure 2.

Gender representation in the sample



4. SCHOOL CONNECTEDNESS – FINDINGS

4.1. School Connectedness in Ukraine

4.1.1. The positive impact of School Connectedness on adolescent development

In 2017, UNICEF in collaboration with the Centre for Sustainable Peace and Democratic Development (SeeD) conducted a large-scale study in Eastern Ukraine, using 3,311 adolescent participants from the government-controlled areas of the Donetsk and Luhansk oblasts. With the aim of examining how school connectedness impacts on adolescent development outcomes, the study found that school connectedness is an important determinant of adolescent adjustment (see Appendix 1)[22]. The interest in the second wave of the data is to investigate if the education system plays the same, significant role across Ukraine the same way it does in the Donetsk and Luhansk oblasts, and how different levels of school connectedness work countrywide.

Data for the second wave was collected in 2018 from 200 educational institutions in Ukraine with a total of 7,846 adolescents (aged between 12-19 years old) completing the questionnaire. The sample was expanded to incorporate data of adolescents from a total of eight oblasts: Donetsk, Luhansk, Dnipropetrovsk, Zaporizhia, Kharkiv, Mykolaiv, Lviv, and Kyiv oblasts.

To examine whether the positive effects of school connectedness that were obtained from the wave 1 data are well-established across the country as well, a re-analysis of the 2017 (wave 1) SEM for school connectedness was carried out using the wave 2 (2018) dataset. Appendix 2 shows the SEM for school connectedness using wave 2 (2018) dataset. Even though most of the findings observed between the two SEMs are similar, some key differences are identified. First, sense of school safety acts protectively against experiences of victimisation in the Donetsk and Luhansk oblasts (2017 model), but not countrywide. Furthermore, in measuring civic participation and readiness for political violence, as well as self-harm and suicidality, different methodological procedures were employed between the two data collections time points. By enlarge though, the present model confirms that, except for minor differences, school connectedness significantly contributes to adolescents' positive development. In particular, the study found that school connectedness:

22. 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).

- Increases readiness for civic participation while, simultaneously, reduces the risk for engaging in political violence. This shows that being more emotionally involved to the school transfers to macrosystems as well; the adolescents' school experiences and social connections are important in mimicking the way young people will respond to society as a whole.
- Decreases the likelihood that adolescents will be involved in bullying incidents. In other words, students who have positive feelings about their school, who experience a sense of belonging, feel that their teachers care about them, and have friendships which they are emotionally invested in, are less likely to be involved in bullying behaviours.
- Is predictive of decreased levels of being victimised, while experiencing increased school safety. Connected adolescents perceive the school environment differently than less-connected adolescents do: the former develops friendships and relations that are respectful and trustworthy. Creating supportive social networks acts protectively and limits the risk of becoming a victim of bullying.
- Increases life satisfaction. The positive influence of connectedness on life satisfaction may relate to the fact that school connectedness serves the motivational need to belong[23]. Satisfying this need is rewarding to adolescents, thus becoming more satisfied with their lives.
- Is related to improved academic performance and decreased levels of considering to drop-out of school. In line with global findings, adolescents participating in the second wave of the study who reported higher levels of bonding to school and more positive relations to their teachers and peers are more committed to school life, leading to higher grades and less likely to consider dropping out of school.
- Predicts decreased levels of internalising symptomatology and behaviour problems, such as anxiety, depression, substance use, and unsafe sexual behaviours. Connectedness appears to have a beneficial impact on adolescents' psychosocial and behavioural well-being. Positive experiences and supportive relations in the school protects the individual; connected adolescents are less likely to have the need to act out (e.g. conduct disorder and aggression) and are also less likely to experience the negative emotionality that characterizes internalising mental health problems.

The results from both waves of the study demonstrate that by nurturing school connectedness, the education system can contribute to promoting positive developmental outcomes. The results converge despite the geographical differences in the sampling, which adds more credibility and strength to the findings.

The findings of the adolescent study in Ukraine regarding School Connectedness has important theoretical and practical implications. Analyses from two waves of data confirmed the important role that school connectedness plays for adolescents' emotional, and behavioural adjustment. Connected adolescents are, overall, more satisfied with their lives. They are less likely to experience negative emotionality and behavioural challenges, and they exhibit higher levels of civic and education adjustment as manifested not only through higher academic performance but through the low levels of bullying and victimisation experiences, as well as more readiness for positive civic participation. These findings add to the existing literature; specifically, our results support those of previous research that concluded that school connectedness enhances academic success[24], whereas lack of school connectedness is associated to both behaviour problems[25] and mental health issues, such as depression and suicidality[26]. Overall, both past and present empirical findings suggest when we nurture school connectedness, we increase adolescents' abilities to adjust more efficiently to their environments.

23. 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.
24. Crosnoe, R., Johnson, M., & Elder, G. (2004). Intergenerational bonding in school: The behavioural and contextual correlates of student–teacher relationships. Sociology of Education, 77, 60–81.
25. Loukas, A., Ripperger-Suhler, K., & Horton, K. (2009). Examining temporal associations between school connectedness and early adolescent adjustment. Journal of Youth and Adolescence, 38, 804–812.
26. Millings, A., Buck, R., Montgomery, A., Spears, M., & Stallard, P. (2012). School connectedness, peer attachment, and self-esteem as predictors of adolescent depression. Journal of Adolescence, 35, 1061–1067.

4.1.2. Why School Connectedness matters

As far as our data shows, School Connectedness should be viewed as a measure of achievement. Further analyses of our data provide support to the ongoing education reform. The top 10 schools with the highest levels of school connectedness experienced significantly better developmental outcomes compared to schools with the lowest levels of school connectedness. Differences were found in all contexts of adolescents' lives (see Tables 1 and 2). Firstly, students from schools with the highest levels of school connectedness report higher Life Skills. Specifically, they are more cooperative and express higher respect for diversity than their adolescent counterparts from schools which demonstrate the lowest levels in school connectedness. They also reported more positive life quality (mean score = 6,7) than their equivalent counterparts (mean score = 5,9), more proneness to non-violent civic engagement, and a greater sense of school safety. Alternatively, adolescents from schools with the highest levels of school connectedness are less likely to engage in aggressive, and destructive behaviours, or experience internalising problems (see Table 2). These findings communicate a strong advocacy point and illustrate what adolescent students can reach if school connectedness is encouraged and promoted.

Table 1.

Comparison Based on Positive Outcomes

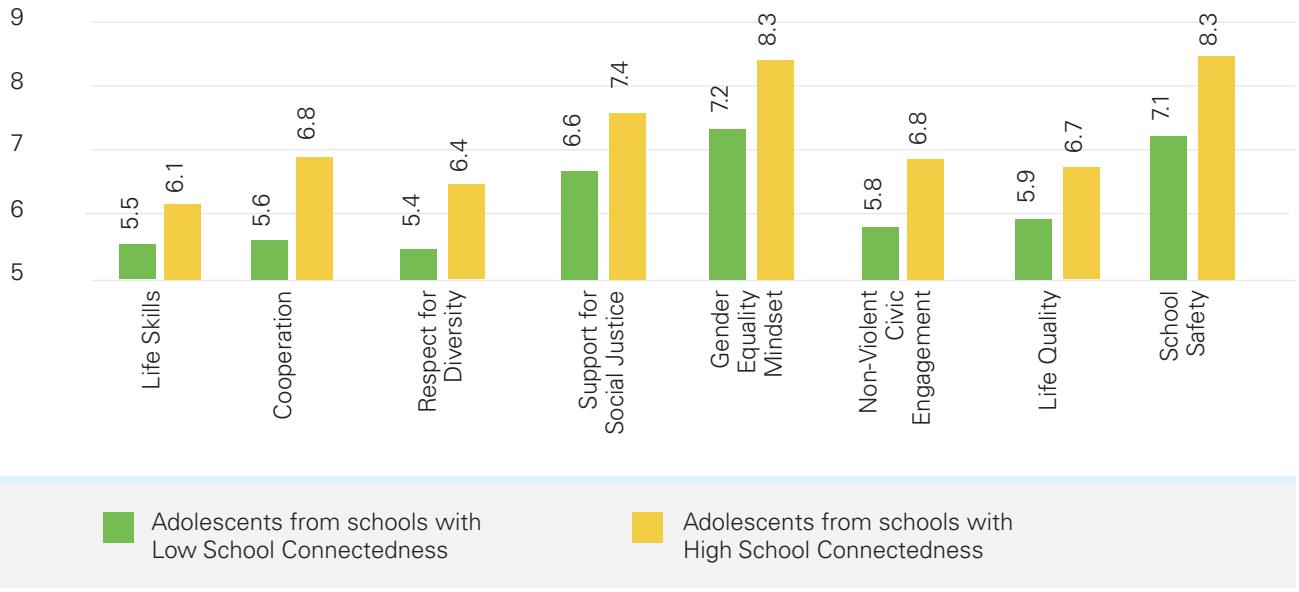
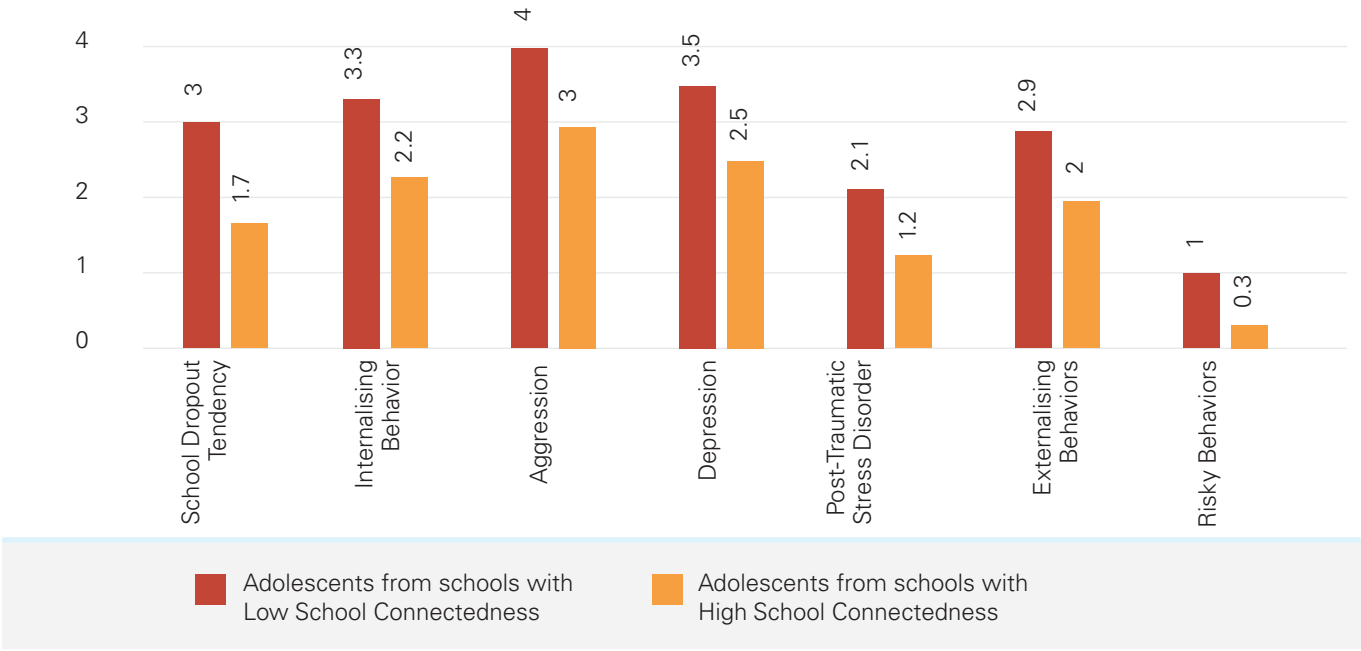


Table 2.

Comparison Based on Negative Outcomes



4.2. The composition of School Connectedness in Ukraine

4.2.1. The influence of the proximity to the contact line on School Connectedness

Adolescents in eastern Ukraine experience higher levels of school connectedness compared to adolescents from other oblasts (see Figure 3). Areas in close proximity to the conflict line are defined as areas within 15 kilometres of the contact line in the government-controlled areas (GCA) of Donetsk and Luhansk oblasts. Due to the challenging everyday encounters with the reality of the conflict, such as proximity of military sites to schools and kindergartens[27], it was expected that adolescents would not be able to benefit from what the school had to offer. Additionally, because teachers are also affected by the conflict, it was expected that this would diminish their ability to be protective figures towards adolescents. Our findings, though, do not support these claims. This is definitely an optimistic finding considering that children in eastern Ukraine face constant danger and uncertainty, which jeopardizes their sense of safety on a daily basis. Further analyses revealed that six out of the top 10 schools with the highest experiences of school connectedness were in the Donetsk and Luhansk oblasts. On the other hand, only three equivalent schools were from the Kharkiv oblast which obtained, overall, the highest mean score of School Connectedness (see Figure 3). The findings, though, should be interpreted with caution. Even if Donetsk and Luhansk schools were among those with the highest mean scores for school connectedness, six out of the bottom 10 schools were also found in the Donetsk and Luhansk oblasts. Specifically, for eastern Ukraine, these findings are important because they demonstrate that conflict exposure does not necessarily mean poor school experiences. Different factors are important and influence levels of school connectedness in each school. The impact of the "Safe Schools" programme is, for instance, one factor that influences levels of school connectedness.

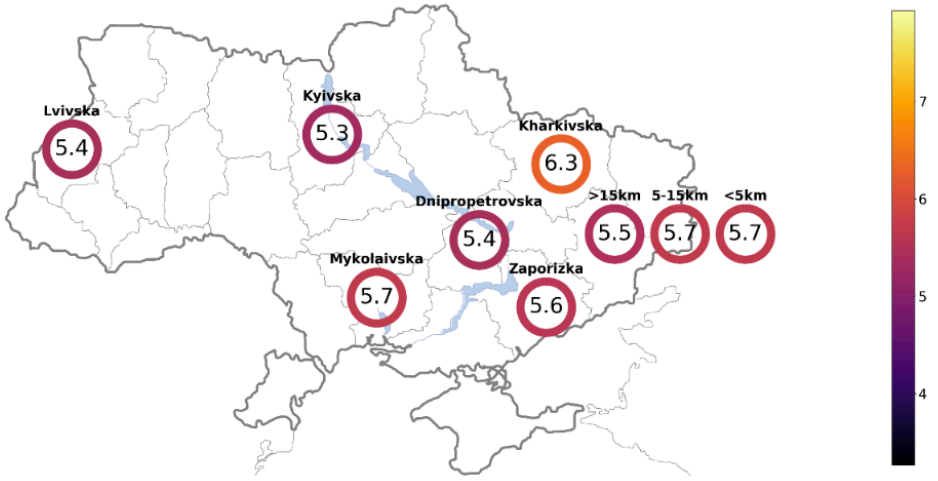
On the other hand, sense of school safety (such as going to and from school, or feeling safe in the school yard) was found to be the lowest in girls close to the contact line (<5km). The fact that more than 700 schools have been damaged or destroyed in eastern Ukraine since the conflict began[28], along with

27. UN Children's Fund (2018)
28. UN Children's Fund (2018)

the constant presence of armed military personnel, or shelling, may have left its mark in how safe girls perceive the school grounds to be. However, the fact that boys living closer to contact line still perceive schools to be as safe as do adolescents across Ukraine may be a sign of normalisation of shelling, meaning that they regarded shelling and other conflict-related experiences as the 'norm'. Another reason for this might be the fact that boys living in close proximity to the conflict line have significantly higher callous-unemotional traits than girls or boys living elsewhere in Ukraine.

Figure 3.

Mean scores of School Connectedness across oblasts.



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

In the Ukrainian study on adolescence, students experience lower levels of teacher support than peer support and emotional connection to school. Interestingly, this finding is consistent across the country, meaning that this pattern of findings, that teacher support is rated the lowest, is identified both in areas closer to the conflict line – where teachers experience conflict-related experiences on a daily basis – as well as in the rest of the country (see Figure 4). Consequently, programmes and school standards aimed at enhancing teacher support should constitute a priority nationwide.

Our findings provide support to the ongoing education reform, where special focus is given on enhancing teacher support and applying student-centred learning approaches. From the six items that measure school connectedness, the worst performing items are about teachers not being responsive enough to students' needs, teachers not providing them with the support and encouragement they need, and about not sharing close feelings towards other people at the school (see Table 3). For instance, in regard to the item "The teachers at my school are responsive to my personal needs", less than 1 every 5 adolescents (18%) consider this to be absolutely true. On the other hand, only a small minority of adolescents reported extreme low levels of peer support. For example, on the item "I can count on my friends when things go wrong", only 9% of adolescents consider this to be absolutely false whereas the percentage of adolescent students who reported that they totally agree with the statement goes up to 41%. First, to establish higher levels of school connectedness, teachers should become more emotionally mindful and responsive to adolescents. Furthermore, student-centred learning, which acknowledges

the importance of learners' voices as central to their learning, should be highly prioritised in school policies. Student-centred learning moves past the traditional approach in education where students adopt a passive, receptive role during instruction; instead, in student-centred education, the locus of activity and control shifts to individual responsibility for (i) setting learning goals, and (ii) deciding on means of learning[29]. It equips

29. Hannafin, M.J., Land, S., & Oliver, K. (1999). Open learning environments: Foundations and models. In C. Reigeluth (Ed.), Instructional design theories and models: A new paradigm of instructional theory (pp. 115–140). Mahwah, NJ: Erlbaum.

students with the necessary basis and skills on how to learn new knowledge and on becoming autonomous and independent. As a result, learning is not restricted only to the classroom and school environment; in contrast, learners achieve lifelong learning and independent problem-solving.

On the other hand, students who enrolled in rural schools, experience, overall, higher teacher support and are more emotionally invested in their schools than students from secondary schools in urban areas. In contrast, adolescents living in urban areas experienced higher peer support than their rural counterparts. The outcomes signify the need to encourage more supportive relations between teachers and students in urban schools while deepening the adolescents' connections to their schools. In rural areas, the need is to promote peer support and peer connectedness, which may be achieved through team-oriented activities in the classroom or school (e.g. school sporting events to promote teamwork).

Figure 4.

Levels of School Connectedness across the oblasts in Ukraine.

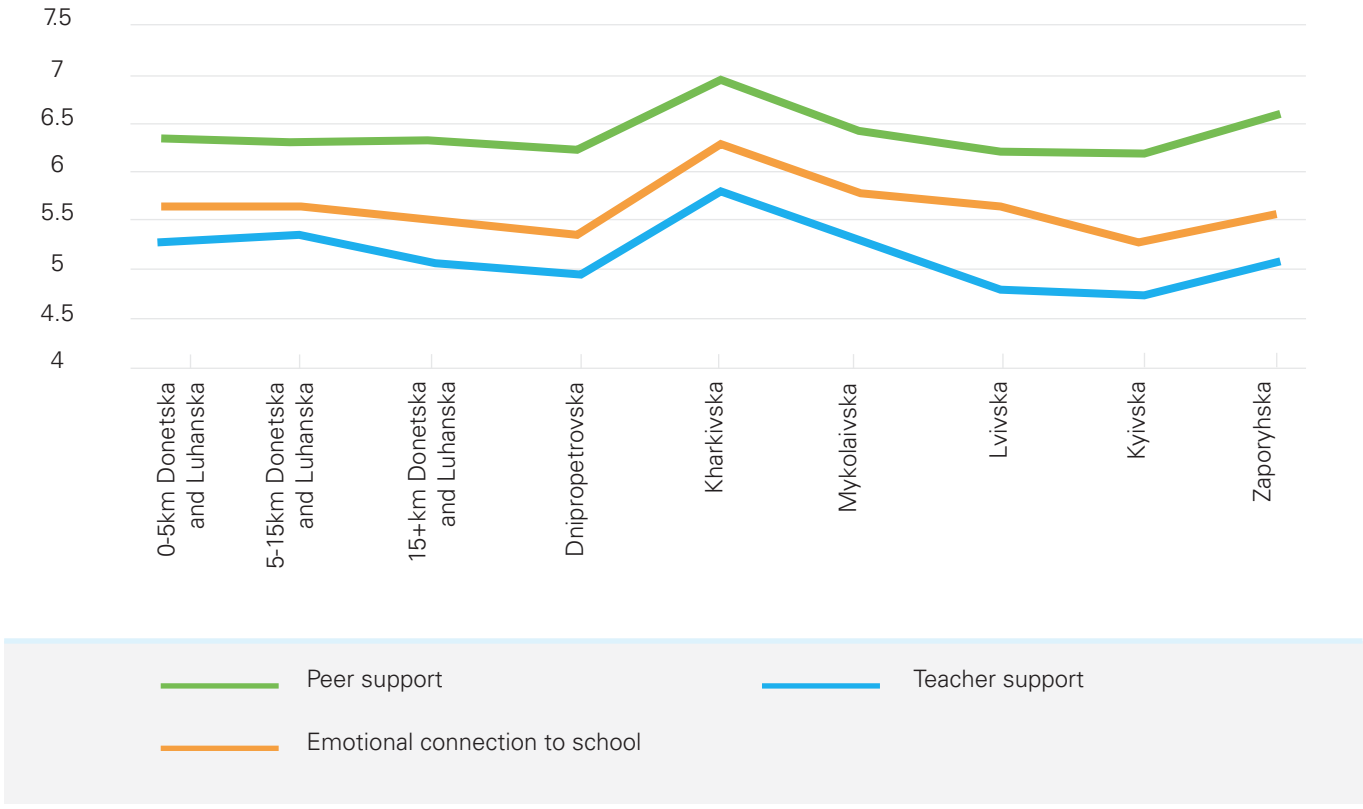
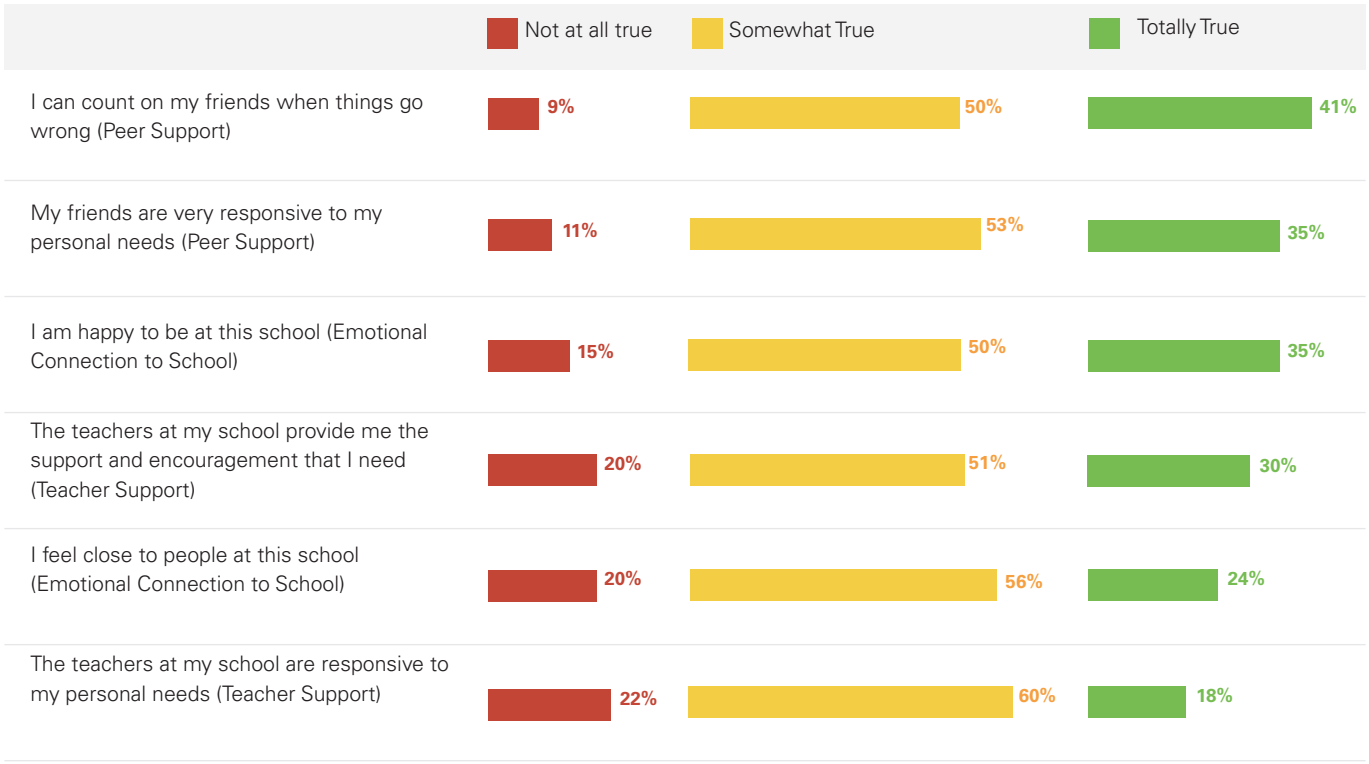


Table 3.

Breakdown of items of School Connectedness.



4.3. The drivers of School Connectedness in Ukraine

As demonstrated in section 4.1.1, School Connectedness plays a central role for adolescents' educational, behavioural, emotional, and civic adjustment. Considering the multitude of positive outcomes related to peer support, teacher support, and emotional connection to school, School Connectedness should be viewed as a proxy by which school experts can assess the effectiveness and impact of certain school interventions, such as the "Safe Schools" programme.

Nonetheless, for school connectedness interventions to be successful, experts should, primarily, be mindful of the influencing factors that drive school connectedness. This is important, because even if direct programming for school connectedness is carefully designed, if the school environment wherein the adolescent is in is challenging, this might lead to inequalities in developmental outcomes. Thus, school experts should also identify how to promote school connectedness.

As we have already mentioned in the introduction section of the report, microsystemic factors are very important for a person's well-being. For instance, findings from the first wave of data demonstrated that family dynamics are crucial in determining the degree to which adolescents will experience school connectedness or not. In other words, what happens at home transfers to the school environment. Specifically, whereas adolescents coming from connected families experienced higher levels of school connectedness, family abuse had the opposite effect. Under that circumstances, abused adolescents could not benefit from the protective nature of school connectedness against negative developmental outcomes, leaving them more prone to aggression, delinquency, depression, poor academic achievement, etc. In other words, even if the education system is of high quality, some children may fail to benefit from it unless there are other effective programmes in place to support at-risk children (e.g. victims of family abuse). Considering how microsystemic factors play such an important role for promoting school connectedness, the focus here falls on school-related factors which may also be significant for School Connectedness. In this manner, certain school policies are proposed as an important mean of building up adolescents' experiences of school connectedness.

Such policies include:

- A safe physical school environment, such as offering students healthy and nutritious meals options, modern pedagogical equipment, and clean and adequately equipped restrooms,

- A safe psychosocial school environment, such as having in effect anti-violence campaigns as well as clear mechanisms on responding to incidents of bullying or violence, offering time to interact with others, and having available psychosocial services for adolescents who need support,
- Competency-based teaching, such as promoting critical thinking, problem-solving skills, group assignments, and discussions, and lastly
- Participatory and inclusive governance, including feeling valued and heard in the school, and having effective student governance school bodies which genuinely promote the needs and interests of students.

4.3.1. School policies contribute positively to experiences of school connectedness

As mentioned in the Introduction section of the report, "Safe Schools" is conceptualized as all the necessary conditions for adolescents' health, social, and academic development. The four school standards presented here constitute the key strategic elements of the "Safe Schools" programme. all of which were modelled to examine their impact on experiences of school connectedness.

From an educational standpoint, school policies were found to play a pivotal role in developing high levels of school connectedness (see Appendix 3). Specifically:

- Safe physical school environment – which includes having healthy and nutritious food choices offered at schools, temperature in classes and common areas to be comfortable all year round, and having clean and adequately equipped restrooms – links to experiences of school connectedness. A further breakdown and investigation of this association to an item-to-item level revealed that being in a physically safe school environment leads to being more emotionally connected to schools. So, for schools which create a safe space for adolescents, it is more likely that this will elicit positive emotions to adolescents, thus increasing the likelihood that adolescents will want to spend time there and get attached to their schools.
- Safe psychosocial school environment, which includes offering extra-curricular activities, or applying effective anti-violence or anti-bullying school programmes, was related to high levels of school connectedness. Extra-curricular activities are advantageous in that they enhance the participation of students in the school life, which then contributes, not only to increased opportunities for friendships, but to students experiencing higher satisfaction and emotional connection to their schools as well. Furthermore, schools that promote mutual respect in the classroom and schools that have clear rules and recommendations on how to respond to violent and rule-breaking incidents results in students feeling less threatened to express and be themselves, thus making way for positive feelings towards the school and its members. This makes sense, because when adolescents are in a safe place where there is freedom to discuss freely what is in their minds without fearing of being ridiculed or teased, then they are more likely to experience a connection to their schools or with their social networks. Furthermore, rule-setting teaches self-control which is important when coming into contact with temptations (e.g. in experimenting with alcohol or illegal drugs) or when having to regulate one's emotions and actions. Finally, psychosocial services (e.g. counselling services) are also more associated to feeling safer at schools. Consequently, adolescents become emotionally more invested in their schools if they consider the schools to actively trying to help them[30].
- Competency-based teaching is significantly predictive of experiences of school connectedness. Quality teaching, such as engaging in open discussions and the encouragement and development of critical thinking skills and problem-solving skills prove to be pivotal in, not only equipping students with the necessary skills for lifelong learning, independence, and autonomy, but also in experiencing positive and supportive social relationships. Furthermore, when teachers are successful in establishing friendly and caring relations with their students, as well as being genuinely interested in their learning course, they indirectly act as positive role models on how social relations should be characterized.
- Participatory and inclusive governance, similar to competency-based teaching, was highly predictive of school connectedness. Being in a welcoming environment, where all concerned

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

parties, including students and parents, feel that diversity is embraced and that they are valued and heard creates avenues for more positive interactions with the schools' teachers, the adolescents' peers, or with the school itself. Furthermore, when the participation of students, parents, and school faculty in school-related matters is encouraged, they experience a greater sense of school satisfaction as a result.

Overall, the findings of the adolescent Ukrainian study on school connectedness supports the use of the four school policies as an approach for promoting connectedness. Such policies provide opportunities for positive and supportive interaction between all members of the school community. In addition, competency-based teaching and participatory and inclusive governance seem to make a higher significant contribution to school connectedness than safe physical and safe psychosocial school environment, highlighting the importance of effectively promoting these two further.

Furthermore, longitudinal analyses, which will be included in a forthcoming report on "Safe Schools", will shed more details on the important contribution of the four unique school standards that are integrated in the "Safe Schools" pilot programme to experiences of school connectedness and adolescent development.

4.3.2. Theoretical and practical implications of the findings

Overall, this part of analyses of the Ukrainian Overall, this part of analyses of the Ukrainian adolescent study should be considered as providing evidence of the important role that a positive, safe and inclusive school environment plays in fostering School Connectedness. The findings have both theoretical and practical significance. Firstly, the outcomes of the Ukrainian study of adolescents confirm and provide support for past research, such as the link between participation in extracurricular activities and school connectedness[31]. Furthermore, rule-setting is also linked in the literature to higher levels of school connectedness, mainly due to the fact that when students feel less afraid of being ridiculed or teased, then they are more likely to become emotionally connected to their fellow peers and the school[32]. In the same manner, adolescents who feel they have the support of their teacher (as expressed through establishing friendly relations, teachers caring about students' actual acquiring of knowledge, and creating a safe space for students) are more likely to feel more connected to their teachers than adolescent students who consider their teachers as lacking warmth and interest towards them.

Further, our findings add to the academic literature by providing evidence that adolescents who study at schools which are inclusive and encourage the participation of all related parties (e.g. students, parents), as well as study in schools which are rated as competent and their teaching is rated to be of high quality, are more likely to experience school connectedness. The findings are important for policy-makers, thus should be taken into consideration when designing and implementing relevant prevention and intervention programmes. Considering how the Ukrainian study of adolescents found evidence that school connectedness is beneficial for a multitude of positive outcomes and decrease of negative developmental outcomes (see Section 4.1.1), evidence on how to promote connectedness is very important. Working towards a positive and safe school climate came out as an important mean of building up adolescents' experiences of school connectedness, so school experts and key stakeholders in Ukraine should use this finding to design relevant programmes and interventions. For instance, our model demonstrates that the most important of the four school policies for promoting school connectedness are competency-based teaching and participatory and inclusive governance. Although this does not mean that the other are insignificant in fostering connectedness, it does suggest though that in the design of policies and interventions which aim to enhance connectedness, competency-based teaching and participatory and inclusive governance should have a central role. One such program is the "Safe Schools" program that is being implemented by UNICEF in the Donetsk and Luhansk oblasts in Ukraine, and the upcoming report will shed light into the programme's effectiveness in promoting adolescents' adjustment and well-being.

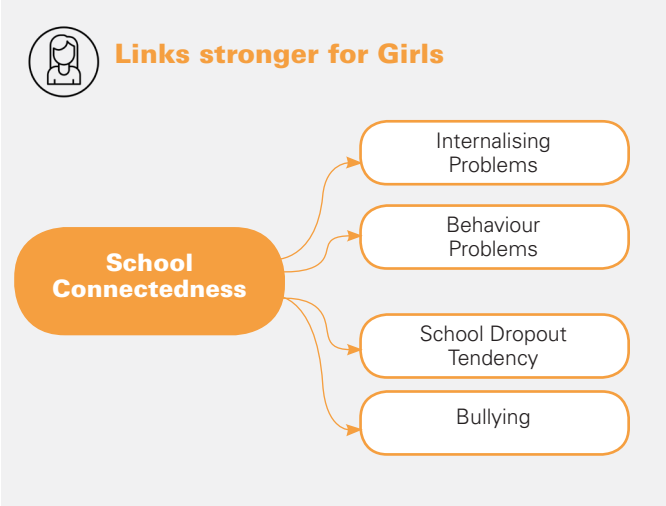
31. Blum, R. W., McNeely, C. A., & Rinehart, P. M. (2002). Improving the odds: The untapped power of school s to improve the health of teens. Minneapolis, MN: Center for Adolescent Health and Development, University of Minnesota.
32. Ryan, A. M., & Patrick, H. (2001). The classroom social environment and changes in adolescents' motivation and engagement during middle school. American Educational Research Journal, 38(2), 437-460.

4.4. Gender and Proximity to the Contact Line

Interestingly, some gender differences were revealed in both waves of data regarding the positive impact of School Connectedness on adolescent development. Whereas both girls and boys benefited from school connectedness, connected girls were significantly less likely than connected boys to become perpetrators of bullying, or experience internalising behaviours and behaviour problems, or consider dropping out of school.

Interestingly, the Ukrainian adolescent study found that, in both girls and boys, the four school policies are similarly important for school connectedness. In other words, when investigating whether any of the four school policies is predictive of school connectedness to a larger degree in boys rather than in girls (or vice versa), no gender differences were revealed. This finding is of importance when school experts design interventions. Usually, when gender differences are revealed and evidence-based programmatic interventions are developed, experts customize programmes to the needs of recipients. For instance, if there was evidence that being in a safe psychosocial school environment is more likely to predict school connectedness in girls rather than in boys, school experts would use this finding and aim at helping girls feel more psychosocially safe in their school environment, by offering more extra-curricular activities aimed for girls, or provide higher quality psychosocial support. Thus, the fact that our study did not reveal any gender differences in how school policies are associated to school connectedness demonstrates that programmes and interventions can follow the "one-size fits all" rule and still expect that both boys and girls will benefit equally.

Furthermore, school policies do not impact adolescents who live close to the grey zone differently than those living further away from the grey zone or elsewhere across Ukraine. In all geographic groups, school policies (and especially competency-based teaching, and participatory and inclusive governance) are equally important for promoting school connectedness. Again, this finding is important for school experts and policy-makers when designing relevant interventions. The fact that no differences were found in how school policies impact on school connectedness in different regions suggests that the same programmatic interventions can be applied across Ukraine without region affecting their effectiveness.



4.5. Encouraging a positive and safe school environment: Recommendations

The findings of the wave 2 Ukrainian study of adolescents provide support for key areas of the education reform, suggesting a number of entry points on how we can help adolescents adjust positively to their social environment. Our findings demonstrate that School Connectedness can and should be used as a tool to measure how successfully the education reform is implemented. As already discussed, adjusted individuals are ones who act in culturally acceptable ways. They are the individuals who do not "act out" against themselves, others, or their environment. They are the individuals who are actively involved in the civic life of their city or country without becoming violent or destructive. Our analyses provide solid evidence of the critical role that school connectedness plays in measuring the well-being of individuals. In both waves of the study, school connectedness is an important determining factor in enhancing positive developmental outcomes, such as academic performance, readiness for non-violent civic participation, and overall experiencing high levels of life satisfaction. At the same time, school connectedness acts against detrimental outcomes – in other words, connected adolescents are less likely than their low-connected counterparts to engage in bullying behaviours, use or abuse illegal substances, engage in violent and destructive actions,

experience anxiety and depression, or consider dropping out of high school. In other words, there is solid evidence in favour of School Connectedness as a means of promoting and measuring societal progress for all citizens in Ukraine. To this end, programmes that will bring about positive change in the education sector will be most effective when the environmental setting supports the development of school connectedness.

The school policies which were investigated in the study were found to play a significant role in the levels of school connectedness of adolescents. In schools where students feel valued, respected, and that their views matter in the decision-making process of school-related matters, then these students are more likely than others to be emotionally invested in their schools. Each of our structural equation models should be viewed as essential to the other. In other words, to be a behaviourally, emotionally, and socially adjusted adolescent, then school connectedness is a definite prerequisite.

Competency-based teaching and participatory and inclusive governance came out as the most important factors in fostering school connectedness. These findings are important because to design and implement effective short-term or long-term intervention programmes, there needs to be an understanding of the indicators down to the item level. This way, items with a conspicuous over-percentage of negative responses (or under-percentage of positive responses) would be prioritised in urgent interventions or focus policy to specific issues.

Overall, the analyses of the Ukrainian study of adolescent students demonstrate that they are more satisfied with how psychosocially safe they experience their schools to be compared to feeling positive about the school's physical environment. Specifically, in measuring the "safe physical school environment" indicator, responses from the questionnaire demonstrated that adolescents are satisfied the most with their schools' playground and sports facilities compared to other aspects of the school environment. However, to ensure that adolescents rate the quality of their school's physical environment more positively, this will require investment primarily in: (i) offering better quality food, (ii) heating infrastructure, (iii) restrooms to be adequately equipped and be kept clean.

Regarding how students rate the quality of teaching, our analyses showed that, overall, students consider teaching in their schools to be of high quality. For example, the majority of youth feels that their teachers are committed to their work, and that they care not only about delivering the curriculum but for students to actually learn knowledge. Moreover, more than a third of students believes to be "absolutely true" that their teacher-student relations are positive and friendly. Where more work could be done is in (i) providing more opportunities for collaboration and group work between students, and (ii) applying effective activities and programs to promote higher critical thinking and problem-solving skills in adolescents.

Finally, in terms of school governance, at first glance it seems that most adolescents are satisfied with how participatory their school is, with approximately 46% of adolescents agreeing that there are effective student governance bodies in their schools (e.g. school councils, students' committees) which genuinely represent the needs and interests of the student community. However, a closer investigation of the item-per-item breakdown of the indicator we notice that only 28% of the adolescents reported feeling that their opinion matters in the planning of school life, and similarly, only 31% reported that "students in our school can openly express their feelings and opinions about the education process and school life, with confidence that school authorities will take them under serious consideration". Feeling that your thoughts are heard and valued is quite important during adolescence since young people are one step closer to reaching adulthood. When adolescents become adults, it is expected that they will make important decisions on various issues, such as about their future education, and academic and occupational aspirations. This signifies that schools should put more effort when making school-related decisions to hear and include the opinions of students as well.

Consequently, considering how competency-based teaching and participatory and inclusive governance came out as the most important factors in fostering school connectedness (see section 4.3.1), it is suggested that stakeholders and school experts invest primarily in those two policies. From the teachers' side, active learning should become a central part of their method of teaching. Students should be reinforced to engage in more open discussions with one another and get increasingly more involved in group assignments. Furthermore, interventions which aim to increase critical thinking skills and problem-solving skills among adolescents should be developed and be applied. Finally, from the school's side, management of the school should invest more in valuing, respecting, and considering more students' views and opinions in the planning and decision making of school matters.

5. OVERALL RECOMMENDATIONS AND CONCLUSIONS

The main aims of educational institutions across the world are to create the necessary conditions for children and adolescents to achieve a balanced, positive development. Schools are one of the most important avenues through which children are expected to become literate, to learn social skills, to learn how to behave, make decisions, think critically, and become useful, productive citizens. Our findings confirm that, indeed, schools are one of the most central aspects of an individual's life through which he can become an adjusted person in all spheres of their life; behavioural, emotional, educational, and civic. The fact that the Ukrainian study of adolescents on School Connectedness are in line with the findings of past research confirms that the benefits of a connected school for the adolescents' well-being are cross-cultural. So even if our findings are Ukraine-specific, they shouldn't be seen as exclusive only to the context of Ukraine; experiences of school connectedness would benefit students from United Kingdom, Germany, Italy, Spain, Russia, United States of America, and so on. Certain recommendations can be drawn from the study's findings.

1. Ministries of Education, and educational stakeholders and policy-makers should consider school connectedness as a holistic approach to adolescent development; all three constituent elements are necessary for adolescents to engage in healthy behaviours.

2. Customised programmes should be applied when necessary, since schools may differ in where they should pay more attention. In Ukraine, our analyses suggest that more attention should be given in enhancing teacher support, so teacher re-education might be a stepping stone to achieving higher levels of school connectedness.

3. Since SCORE is a well-established adolescent tool to measure the impact of pilot interventions and identify specific needs within education reforms, the tool should be used as a measure of the impact on specific pilot programmes, such as that of Life Skills Education programmes. Furthermore, SCORE should also be used nationwide as a measure of the impact of the education reform.

4. Do not assume that school connectedness can be enhanced through only direct programming. Certain factors may positively or negatively impact the development of school connectedness. Policy makers should identify which factors contribute the most and work towards them. For instance, Competency-based teaching and participatory and inclusive governance have been identified as important drivers of school connectedness. Programmatic interventions should create inclusive environments where teachers, students, and parents are encouraged to participate in the decision-process of school-related issues, while simultaneously ensuring that the cognitive needs of students are met and satisfied. More specifically, some more specific recommendations on what schools could do would include:

a. Engage students and parents in the development of school rules and guidelines, and in the planning of school activities and events.

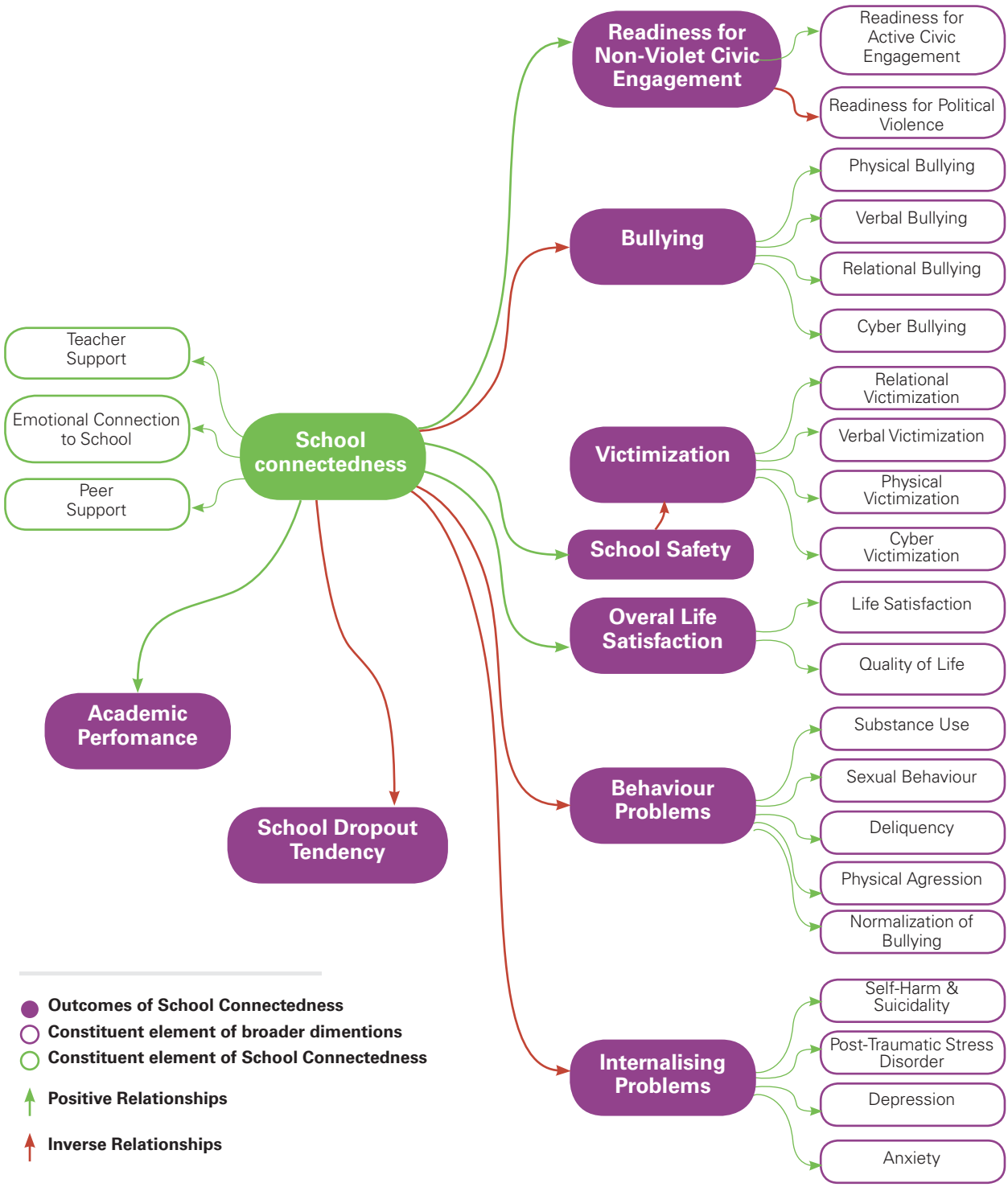
b. Use interactive/experiential learning, including engaging students in group discussions, activities that require critical thinking skills and problem solving, and role-playing activities.

c. Use a repertoire of teaching methods that will allow students to develop critical thinking, problem-solving skills, and co-operation skills (e.g. open discussions, and group assignments).

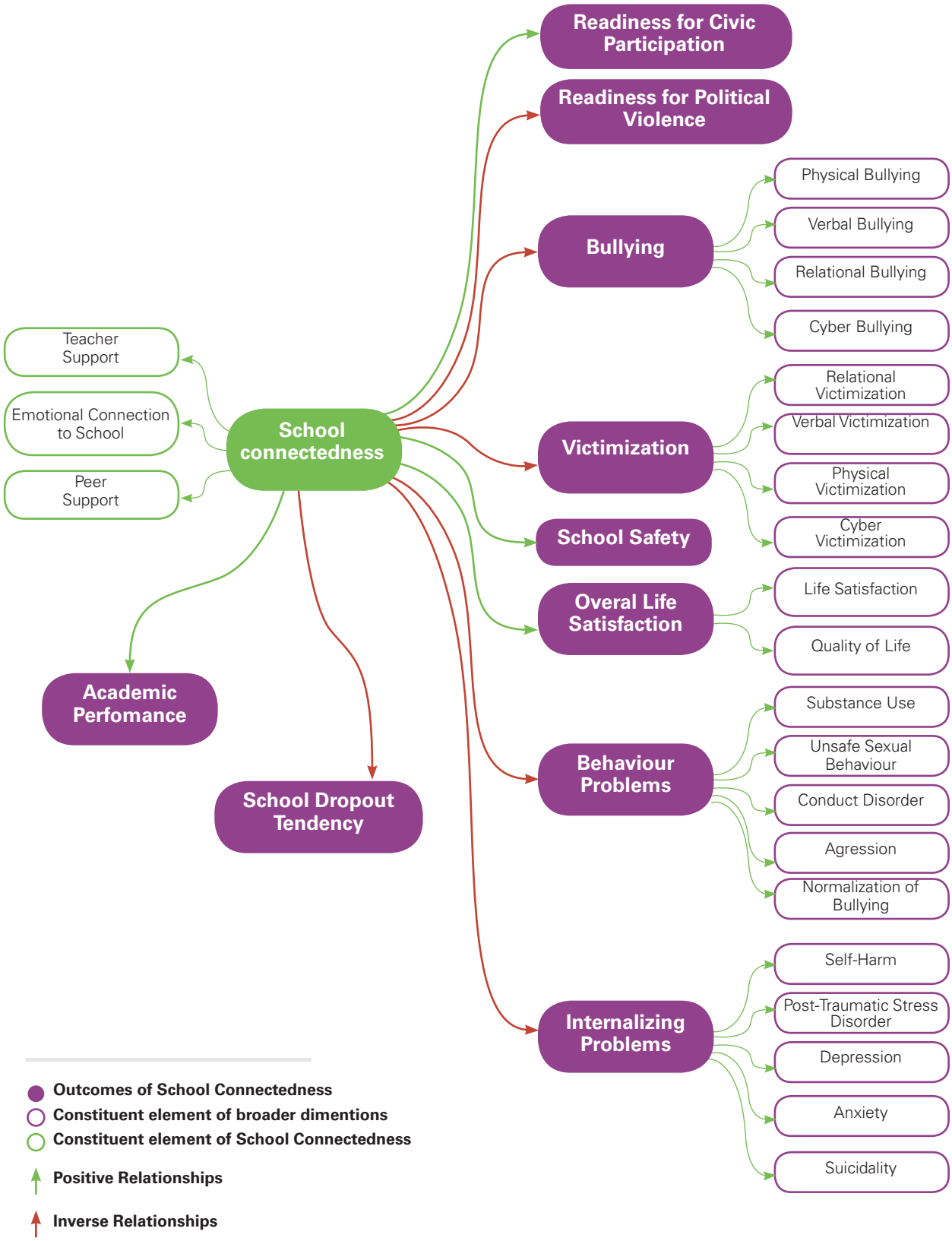
d. Provide counselling services to vulnerable groups that are responsive to the students' needs.

We should think of school connectedness not only as a concept which will grant the interested parties an immediate solution to the challenges they may face. Of course, the benefits of school connectedness are immediate and include, among others: increased interest in academic affairs and academic performance, decreased levels of bullying incidents, and positive emotionality. On the other hand, school connectedness should also be seen as a means to establishing long-term and long-lasting positive outcomes that will extend beyond the school walls. We expect that connected adolescents are more likely, in the long run, to participate more in the civic sphere, but to do so in a positive, productive manner, as well as regulate more effectively their emotions towards negative incidents, thus feeling better about themselves, including experiencing less anxiety, depression, and PTSD, as well as engaging in less disruptive and self-destructive behaviours, including engaging in less binge-drinking or substance abuse, self-harm, or aggressive behaviours.

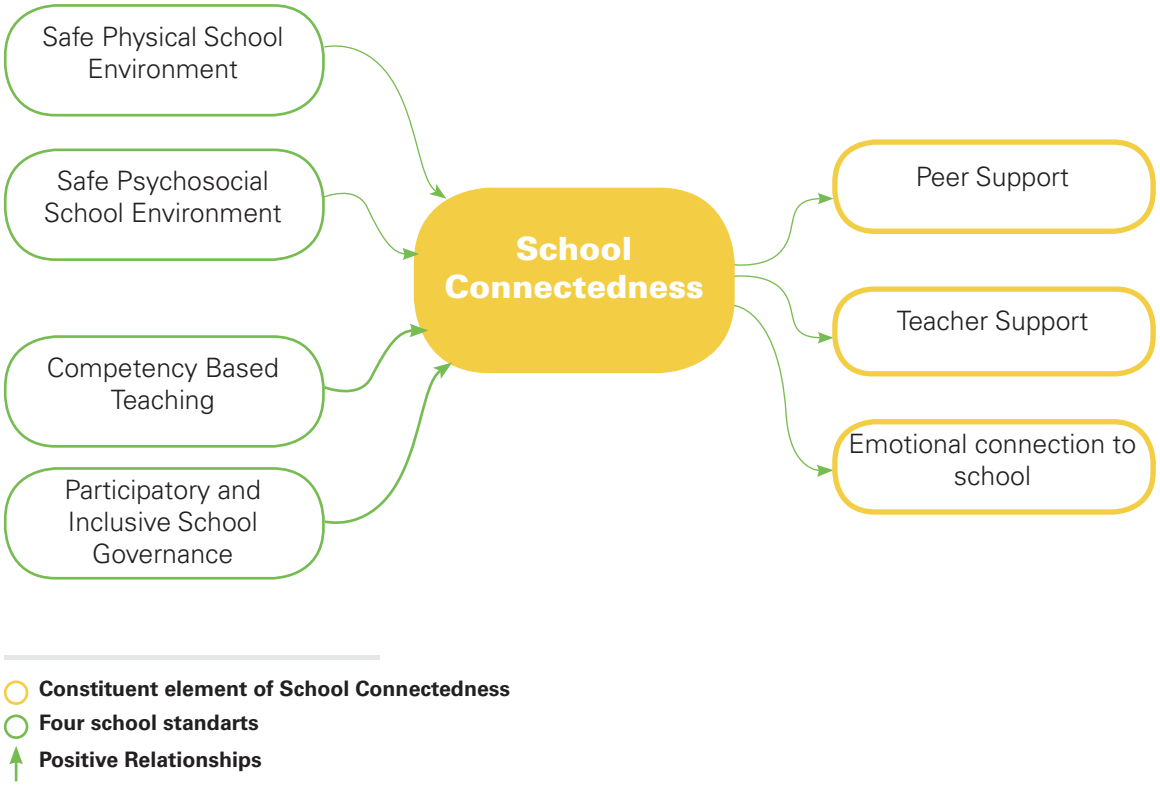
Appendix 1.
The Full Structure Equation Model for School Connectedness (based on wave 1 [2017] dataset)



Appendix 2.
The Full Structure Equation Model for School Connectedness
(based on wave 2 [2018] dataset)



Appendix 3.
"Safe Schools" Standards as Drivers of School Connectedness
(wave 2 [2018] dataset)



Appendix 4.
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.
Delinquency	The extent to which one commits minor, petty crime or breaks the rules (e.g., underage drinking, skipping school, getting into fights).
Depression	Degree to which one feels depressed or very sad.
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.
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.
Normalisation of bullying	The extent to which the act of bullying is regarded as the 'norm', resulting in the perception that this exercise of violent or deviant behaviour over others is acceptable.
Participatory and Inclusive Governance	Policy measures that ensure that that everyone's' views are valued, heard, and respected in the school community.
Peer support	The extent to which one feels supported by and can rely on peers for support.
Post-Traumatic Stress Disorder	Experiencing persistent mental and emotional stress that is triggered after exposure to a traumatic or dangerous event.
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.

Indicator	Indicator Description
Readiness for political violence	Propensity to the use of violent means to achieve political change.
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.
"Safe School" Programme	School programme wherein schools integrate all the necessary school conditions that would provide for the well-being of adolescents (health, social, and academic).
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.
Sense of school safety	The degree to which one feels safe in the school environment.
Self-harm and suicidality	Thoughts of and attempts to injure oneself or commit suicide.
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.
Victimization	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	
Internalizing problems	IIncludes Anxiety, Depression, PTSD, Self-harm & suicidality.
Behaviour problems	Includes Substance use, Unsafe sexual behaviour, Conduct Disorder, Aggression, and Normalisation of bullying.
Bullying	Includes Physical, Relational, Verbal and Cyber bullying.
Overall life satisfaction	Includes life satisfaction and Quality of Life
Victimization	Includes Physical, Relational, Verbal and Cyber victimisation.

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