



Ukraine



Risk, Resilience, and
the Role of School Connectedness in
the Development of Adolescents in

VOCATIONAL EDUCATION TRAINING INSTITUTIONS

in Donetsk and Luhansk oblasts

Acknowledgements

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Glossary

GCA	Government-Controlled Areas
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

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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 vast majority of adolescents that participated in the study were aged between 12 and 19.

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 policies: are defined as established expectations of how a school should operate. School policies 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" policies include: safe physical school environment, safe psychosocial school environment, competency-based teaching, and participatory and inclusive governance.

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.

1. EXECUTIVE SUMMARY

Vocational education and training (VET) is an essential part of the Ukrainian educational system and is a foundation of Ukraine's growth and development, underlining the importance of VET reform in parallel to the New Ukrainian School concept. VET is acknowledged as an important driver for the social inclusion, education and protection of vulnerable groups, and has a key role in the provision of quality education for all adolescents. Given the context of conflict exposure in eastern Ukraine, this report aims to identify the biggest challenges for students attending vocational education institutions (VEI) in Donetsk and Luhansk oblasts, and how these factors influence key learning and developmental outcomes.

To address these aims, a quantitative survey was administered in 2018 to a sample of 7519 adolescents in Donetsk and Luhansk oblasts (3680 VEI students and 3839 students from general schools).

The phenomenon of school connectedness is investigated as a protective factor for adolescent development and as an indicator which can measure the progress in transforming VEI through policies such as competency-based teaching, inclusive school governance, and safe school environment.

The study aims to provide an evidence basis for VEI-specific policy design. This is achieved by contrasting the educational and family environment of adolescents in VEI to that of their peers in general secondary schools, revealing the specific challenges faced by students of VEI. The study compares the life skills, civic behaviours, values and psychosocial indicators of adolescents attending VEI and general secondary schools.

It was found that adolescents in VEI have a higher likelihood of experiencing internalising problems, family abuse and victimisation, which underlines the importance of psychosocial support in VEI transformation. VEI students are less interested in civic participation than their peers, with higher levels of aggression and readiness for violence and lower levels of key life skills.

Despite these challenges, school connectedness was found to be an important protective factor for reducing internalising and behavioural problems in adolescents in VEI, similar to what was observed in students of general schools (see SeeD's study of school connectedness (Connected Adolescents Report)). However, VEI students report that the practices which have been shown to generate school connectedness competency-based teaching, physical and psychosocial safety, participatory governance are not as widely implemented in their schools compared to respondents from general schools.

VEI require integrated educational approaches to develop constructive, engaged and responsible graduates. School connectedness is expected to positively influence psychosocial and civic development, and particular attention should be given to improving cohesion amongst peers in VEI. Developmental differences in VEI students, such as lower life skills, a higher tendency for violence or aggressive behaviour and more behavioural problems, demonstrate the need for social and psychosocial support throughout adolescent education in order to ensure that all students are equally able to reach their maximum potential.

2. INTRODUCTION

To achieve “quality education and fair access to it” in Ukraine, vocational education and training (VET) is undergoing extensive reform, allowing VET to be a key pillar of the country’s growth and development (ETF, 2017). The role of VET transformation in parallel to the New Ukrainian School concept is vital in bridging the gap between education and the needs of the local economy, assisting the government with employment policy implementation, and giving young people the appropriate skills to be more successful (ETF, 2017; Ukraine MoE, 2016). This is particularly important given the role of VET for social inclusion and its function in the education and protection of vulnerable groups¹², which constituted 30 to 50% of state VET institution enrolments in 2015/16 (Radkevych, 2018; EAP-CSF, 2018; ETF, 2017).

The transformation of vocational education institutions (VEI) is taking place in the face of unfavourable biases: that VEI have lower student performance than general schools, that teaching is of lower quality (Korz, 2014) and that VEI prepares students for professions deemed less socially attractive (ETF, 2017). Meanwhile, the chasm between enrolments in academic and in vocational higher education institutions is widening (EAP-CSF, 2018).

Ukraine’s national development plan for educational reform is taking place in the context of conflict, which has given rise to new challenges and realities for families and children (UNICEF, 2017). The unresolved conflict in the East of Ukraine impacts the adolescents who still live in this area, as well as those who have been displaced and have relocated.

This report probes the risk factors associated with negative adolescent development, and how the behavioural outcomes of adolescent VEI students compare to students attending general secondary schools. It also quantifies the challenges VEI students are facing, while analysing subgroups of VEI students to investigate their vulnerabilities. This adds to the existing evidence on the impact of conflict, environmental factors which may protect against adversity, and individual resilience traits of adolescents, which is expected to inform targeted programming and impact assessment.

In line with other reports in this series, the role of school connectedness³ on fostering positive developmental outcomes is also investigated for students attending VEI. The report can also inform UNICEF’s programming relating to the output of “the provision of quality education for all children and adolescents”, which encompasses violence-free, inclusive and competency-based learning⁴ (UNICEF, 2017). Additionally, the report lends attention to the disparity between VEI and general secondary school students in the development of life skills, which have been identified as key competencies that secondary school graduates in Ukraine must obtain (Ukraine MoE, 2016).

The present study focusses on VEI in Donetsk and Luhansk oblasts, with the overarching aim of identifying key differences and similarities between students in VEI and general secondary schools. In keeping with previous reports and UNICEF priorities, all evidence is disaggregated by gender.

Taking the above into account, the report aims to answer the following research questions:

- 1.** What are the empirical similarities and differences in the educational environment of VEI students compared to students in general secondary schools? (See Section [4.1](#))
- 2.** What is the role of school connectedness in mitigating against negative adolescent outcomes and in predicting positive outcomes in VEI? (See Section [4.2](#))
- 3.** How does school connectedness serve as an impact assessment tool for educational reform in VEI? (See Section [4.3](#))
- 4.** What are the characteristics of students attending VEI in the East, and what challenges do they face, compared to adolescents in general secondary schools? (See Section [5](#))
- 5.** How do civic attitudes differ in adolescents attending VEI compared to students of general secondary schools? (See Section [6](#))
- 6.** How does the development of life skills differ in VEI students compared to adolescents in general secondary schools? (See Section [7](#))

1. Including orphans and children without parental care, children with disabilities and children of military service members who died while on active duty (ETF 2017).
 2. Benefits of vulnerable populations group include enrolment without competition, material assistance from state during studies, better living conditions in halls of residence, and often guarantees of employment and housing (ETF 2017).
 3. School connectedness has been identified as an impact assessment indicator of education reform in Ukraine (Lordos et al., 2019). It is a core part of the adolescent component of the United Nations Social Cohesion and Reconciliation Index for Eastern Ukraine (USE), which has been adopted for impact assessment of joint projects between UNICEF and the Ministry of Education and Science.
 4. Competency-based learning or teaching is particularly important given the attention received by the need for modern teaching methods in VET institutions, while inclusive education ties in to the potential of VET to integrate even the most disadvantaged and marginalized adolescents (Radkevych, 2018)

3. METHODOLOGY

3.1. Measurement Instruments

The measures complied with UNICEF's and national ethical considerations on conducting research using children. The present study encompasses indicators that aim to obtain a representative view of adolescents' environment (including risk and protective factors) and their developmental outcomes (such as life skills and positive citizenship). Indicators were constructed using between two and five questionnaire items that were validated using exploratory and confirmatory

factor analysis following data collection. The indicators discussed in this study include adolescent experiences of the school setting (e.g. teacher and peer support), family life (e.g. parental involvement, exposure to domestic violence), externalising and internalising behaviours (e.g. aggression, depression), risky behaviours (substance use, self-harm), and citizenship (e.g. multicultural outlook, civic participation). See Appendix Section [9.1](#) for the full list of indicators.

3.2. Ethical Considerations

Ethical considerations were thoroughly reviewed to ensure the protection of children's rights during the study. Approval of 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. Before administration of the paper-based questionnaire, regional data collection field managers were trained and 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 had 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. All individual envelopes of the class were then sealed by the interviewer in a second envelope prior to the return of the teacher in the room.

3.3. Data Collection and Analysis

The Ukrainian Institute for Social Research after Oleksandr Yaremenko (UISR) was contracted for data collection, which was preceded by an independent ethical review and pilot testing of the questionnaire. For the VEI study, supplementary data using the same questionnaire was collected by La Strada Ukraine.

Following data cleaning, the sample consisted of 3490 students from VET institutions (60.1% male, 39.9% female, ages 13 to 19) and 3799 students from general secondary schools (46.2% male, 53.8% female, ages 13 to 19) in Donetsk and Luhansk oblasts. Age outliers and cases with more than 50% missing data were removed. It should be noted that the VEI sample contained a higher percentage of males, more respondents in the 16-19 age group⁵, and more respondents that lived in large cities than the general school sample. As a result, all analyses were controlled for demographic differences (age, gender, urbanity, oblast). For a demographic distribution of the sample see Appendix Section [9.3](#).

The raw data was processed to form composite scales

(or indicators) by combining several questions. In the SCORE methodology all scales take values from 0 to 10, where 10 expresses the maximum possible intensity of the phenomenon, based on the responses in all the contributing questions. The validity of all scales was confirmed using factor analysis⁶ and reliability analysis⁷. On confirmation of the scales as coherent measures, a mean score can be calculated for each indicator per demographic group. Multivariate analysis of covariance (MANCOVA) was used to determine whether any statistical differences exist in the mean scores of the indicators of interest between VEI students and their peers at general schools, controlling for the differences introduced by the demographic composition the two samples.

Predictive statistical modelling was used to investigate the processes which drive positive adolescent developmental and school outcomes in VEI students. Particularly, structural equation modelling was used to explore how School Connectedness predicts outcomes of development in VEI students – including

5. 75% of VEI students were in the 16-19 age group, while 35% of general secondary school students were in the 16-19 age group.

6. Promax rotation, maximum likelihood extraction

7. Cronbach's alpha larger than 0.6

in learning, civic and psychosocial domains – and how this compares to their peers at general schools. The role of Safe School Policies was investigated by using a structural equation model to determine how each policy influences School Connectedness. A structural equation model was also used to identify the role of internalising and behavioural problems as risk factors for negative

developmental outcomes in VEI students. The structural equation models in this report are comparable to those used in previous reports (Connected Adolescents Report; Lordos et al., 2019), allowing for confirmation of the previous findings. All models were disaggregated by gender.

4. SCHOOL ENVIRONMENT AND SCHOOL CONNECTEDNESS

Perceptions of students in VEI and general educational institutions about their experiences at school were contrasted by comparing indicators which measure the characteristics of the school environment. Overall, VEI students report that their environment is less supportive, less connected and less safe compared to their peers in general schools.

School connectedness, a term encompassing how close students feel to their peers, teachers and school environment, has a demonstrated impact on positive developmental outcomes for adolescents, alongside protecting against adverse behaviours, and improving educational outcomes (Connected Adolescents Report; CDC, 2010). School connectedness has been identified as an impact assessment indicator of education reform in Ukraine and for joint projects between UNICEF and the Ministry of Education (Lordos et al., 2019). The questions which make up the school connectedness indicator are given in Section [9.1](#).

16% of VEI students report that they cannot count on their friends when things go wrong and that their friends are not responsive to their personal needs, compared to **11% of general high school** students. **24% of VEI** students do not feel close to people at their school compared to **20% of general school** students.

Differences in teacher support are slight – **21% of VEI students and 19% of general school** students do not

feel supported or encouraged by their teachers, while **24% of VEI students and 22% of general school** students do not feel that teachers are responsive to their personal needs.

Between **15 and 19% of VEI students** feel afraid at school, feeling the least safe in their classrooms. Between **11% and 14% of general school** students feel afraid at school, feeling the least safe in the school bathroom.

Only **85% of VEI** students report that their school has anti-violence campaigns and mechanisms of dealing with bullying, compared to **88% of general school** students.

78% of girls at VEI feel close to people at their school compared to **75% of boys**.

87% of girls feel happy to be at their school, compared to **84% of boys**.

In line with previous findings (Connected Adolescents Report), school connectedness in VEI has a positive effect on psychosocial adjustment (increasing life satisfaction, reducing internalising and behavioural problems), fostering positive citizenship and undermining adolescents' experience of victimisation and bullying.

4.1. Understanding the Learning Environment in Vocational Education Institutions

Compared to students in general schools, VEI students report lower levels of support from their peers and their teachers, and a lower emotional connection to their school, resulting in a lower score in overall school connectedness, a composite of these three indicators (Figure 1). Furthermore, boys in VEI report a significantly lower school connectedness than girls. The greatest difference between VEI and general school students was in peer support, which implies that there is a breakdown in relationships among students in the former. Unlike peer support, the differences between VEI and general schools in emotional connection

to school and teacher support were not statistically significant after we controlled for age, gender, urbanity and oblast. Differences between general schools and VEI are not only due to the characteristics of the VET system, but can also be explained by taking into account the difference in the demographic profile of adolescents who make up the majority of VEI students: older and more urban males (see Section [3.3](#)). This demographic group reports lower emotional connection to school than younger or female students, for example. This explains why we find lower emotional connection to school in VEI students: because VEI tend to have

more male students and male students (regardless of school type) tend to have lower emotional connection to school.

Compared to their peers in general secondary schools, VEI students report that they feel less safe at school, despite reporting a lower frequency of school conflicts (Figure 2), possibly due to differences in perception of what constitutes a school conflict.

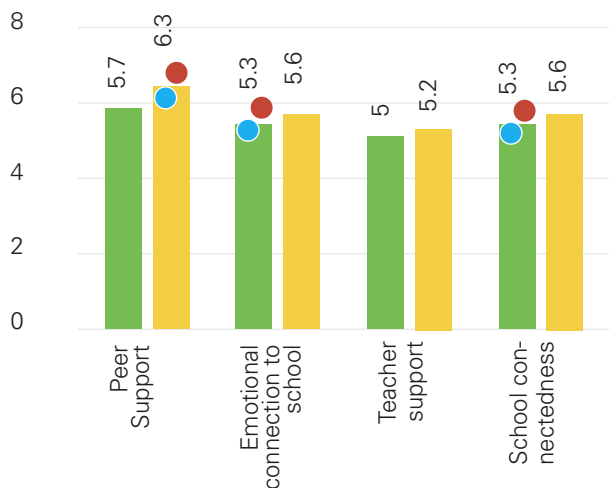
Four key indicators measuring the educational environment were also compared between the two samples, showing that VEI are in need of support compared to general schools (Figure 3). For definitions and description of these indicators see Appendix Section 9.1. Competency-based teaching, a key aspect of VEI transformation, is lower in these schools demonstrating the continuing need to focus on modernising the teaching methods at VEI. The lower scores that VEI students report for participatory and inclusive school governance, safe physical environment and safe psychosocial environment can partly be explained by demographic differences in the samples. Lower scores in physical safety arise due to differences in urbanity – both VEI and general school

students feel less physical safety if they live in urban areas. Differences in psychosocial safety are gender-mediated, with girls feeling safer than boys irrespective of the type of school they attend (possibly due to their higher levels of life skills, discussed in Section 7). For inclusive governance both effects hold, with urban males perceiving the least inclusivity in their schools' governance. Overall, our findings suggest that interventions aimed at increasing inclusivity, physical safety and psychosocial safety should be designed to consider challenges faced by urban adolescents and particularly males, in both school types.

Adolescents at VEI exhibit a higher readiness for political violence than adolescents at other schools, a lower readiness for civic participation (these differences are greater for girls), and a much lower endorsement of human rights (Figure 4). In accordance to the New Ukrainian School concept, the development of civic competencies remains important across all types of schools and must not be overlooked as a learning outcome (either formal or non-formal) in VET curricula (ETF, 2017). Girls in both kinds of institutions are achieving better scores across all civic indicators than

Figure 1.

Levels of school connectedness indicators in VEI schools and general schools⁸

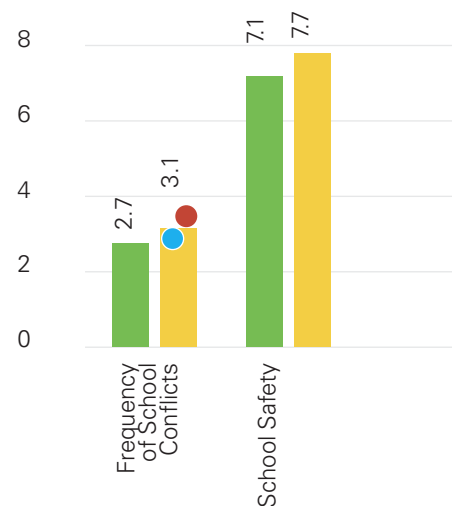


■ Vocational Education Institutions
■ General Secondary Schools
● Girls
● Boys

8. Scores for boys (blue) and girls (red) are shown only if they are found to be significantly different. Where blue and red markers are not displayed, no statistically significant gender differences were found. Variable names in bold signify that the difference between the VEI and General schools remains significant after controlling for demographic factors (gender, age, urbanity, oblast). Variable names not in bold were found to be significant, but the difference ceases to be significant after controlling for demographic differences. Significance limit used: $p \leq 0.05$.

Figure 2.

Levels of academic indicators in VEI schools and general schools.



■ Vocational Education Institutions
■ General Secondary Schools
● Girls
● Boys

boys, indicating that civic education should be prioritised for boys, and that girls’ voices within VEI should be amplified in an effort to encourage more constructive civic norms.

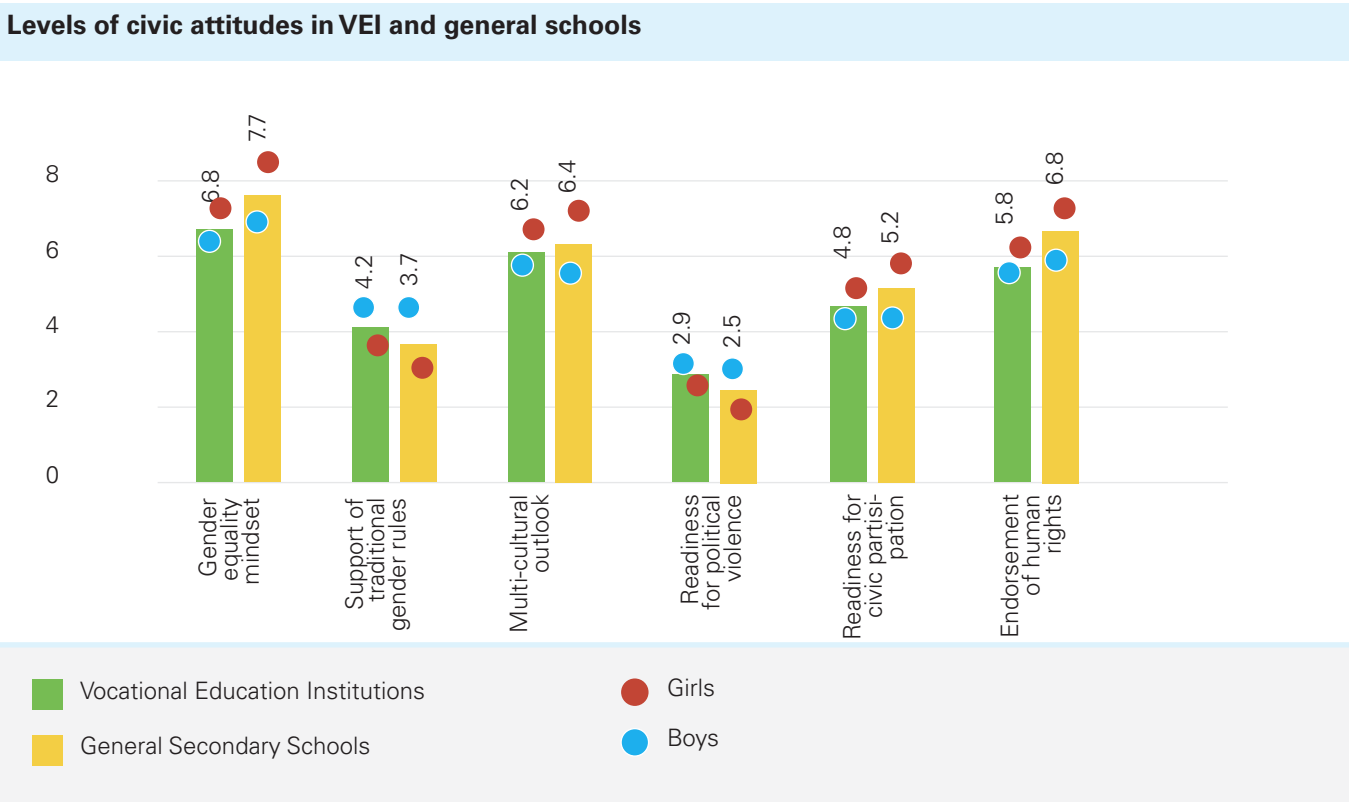
25% of VEI students believe that violence is sometimes necessary for the benefit of the country and **23%** are willing to resort to violent means to change the current conditions in their community or society in general.

These figures compare to **18% and 19% of general**

Figure 3.



Figure 4.



4.2. The Impact of School Connectedness on Adolescent Development

school students, respectively.

School connectedness has been shown to positively influence adolescent development outcomes in secondary schools (see Connected Adolescents Report). To assess the role of school connectedness as a driver of the same outcomes in VEI, we conducted the same predictive analysis on the VEI student sample (Figure 5). For VEI students, much like students from general secondary schools, having higher levels of school connectedness leads to positive outcomes. Among the outcomes tested, school connectedness has the strongest impact on increasing the levels of academic performance ($\beta = 0.23^9$) and life satisfaction ($\beta = 0.41$). The only gender difference observed was that school connectedness is more crucial for increasing perceived academic performance and school completion tendency in girls rather than boys.

One of the key competencies introduced in the New Ukrainian School concept is the ability for constructive participation in society (ETF, 2017; Ukraine MoE, 2016). It is therefore important to highlight that school connectedness encourages higher readiness for civic participation ($\beta = 0.20$) in VEI students, as was observed in students at general schools (see Connected

Adolescents Report). It also reduces violent tendencies (readiness for political violence, and bullying), although it is less effective at doing so (β weights with magnitudes less than 0.1). Secondary schools with higher levels of school connectedness may therefore be considered incubators of the new generation of socially engaged citizens.

School connectedness is also relevant for mental health, reducing behaviour problems ($\beta = -0.10$) and internalising problems ($\beta = -0.14$). However, the impact on internalising problems is much weaker than the impact of school connectedness that was discovered in general schools (the equivalent beta-weight for general schools was -0.38). At the same time, VEI students report a lower quality of life and more behavioural problems than their peers at general schools, including conduct disorder, unsafe sexual behaviour, substance abuse, aggression and normalisation of bullying (Figure 6). They have higher incidences of self-harm and suicidality (Figure 7). Taking these observations into account and given that school connectedness has been shown to mitigate negative psychological outcomes, interventions on school connectedness must also integrate psychosocial support in adolescents attending VEI, to ensure the good mental health of adolescents in

9. Beta weights (β) express the size of the impact of a particular driver on a particular outcome in that predictive model. If the score of the driver increase by one, we expect the score of the outcome to change by the value of the beta weight. A positive beta weight implies that that particular driver positively influences the outcome (by increasing it) while a negative beta weight implies that that particular driver negatively influences the outcome. Beta weights with absolute values of greater than 0.1 are considered to be large.

Figure 5.

Predictive model showing impact of School Connectedness on key adolescent outcomes in VEI students.

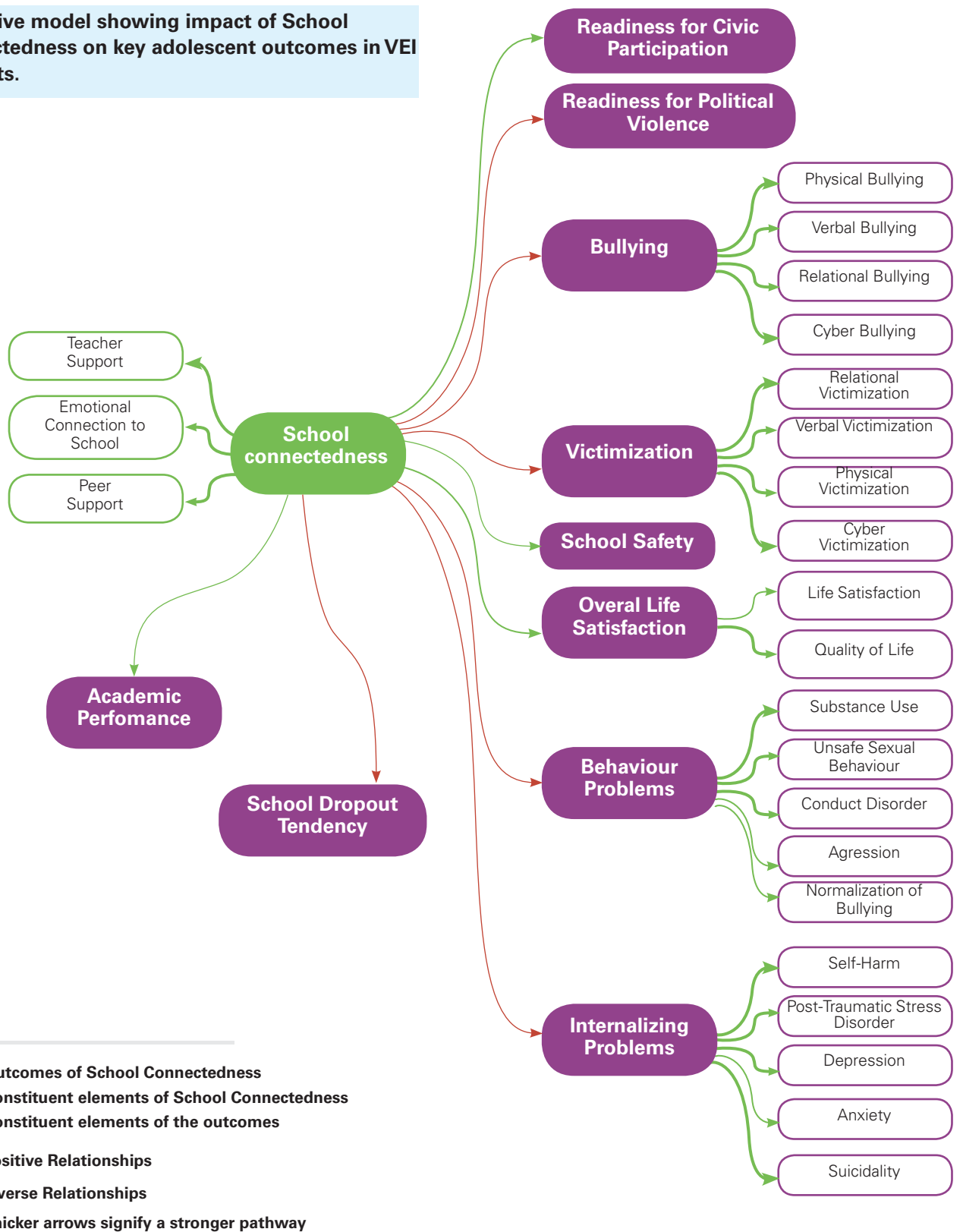


Figure 6.

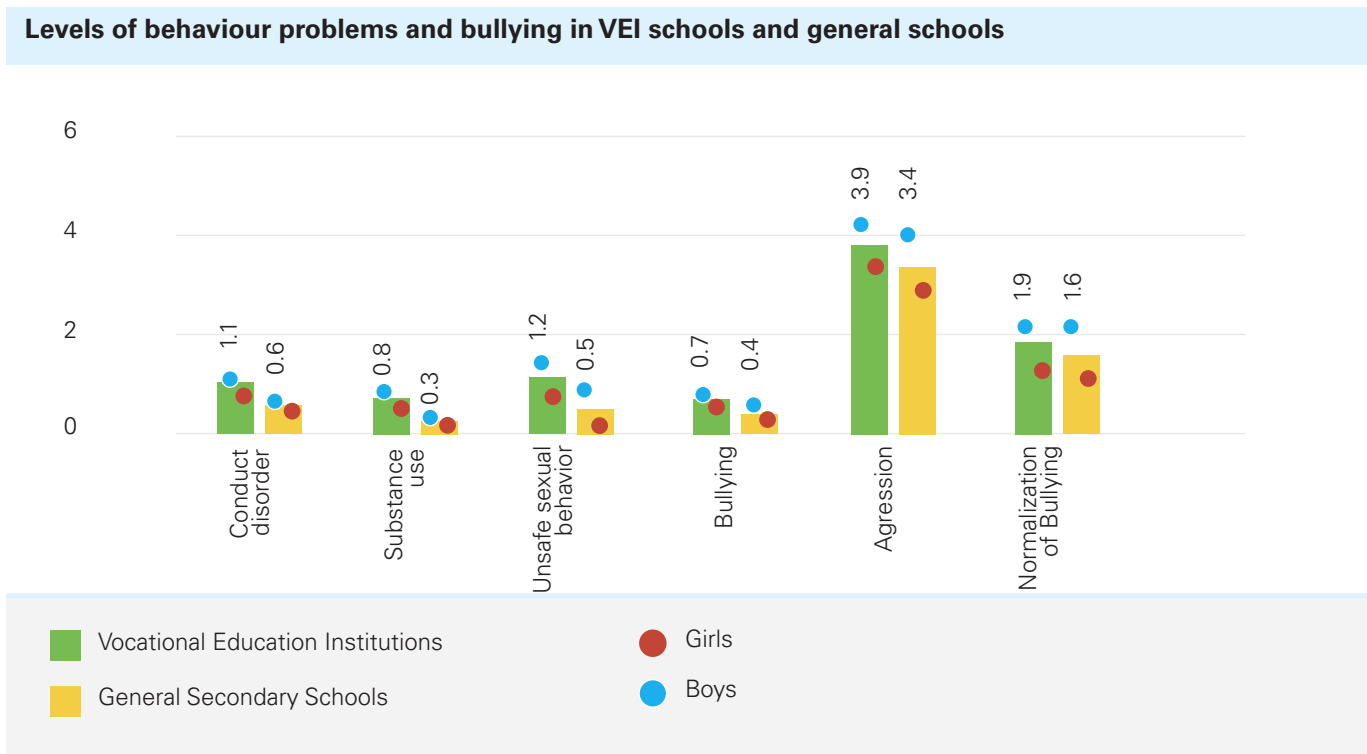
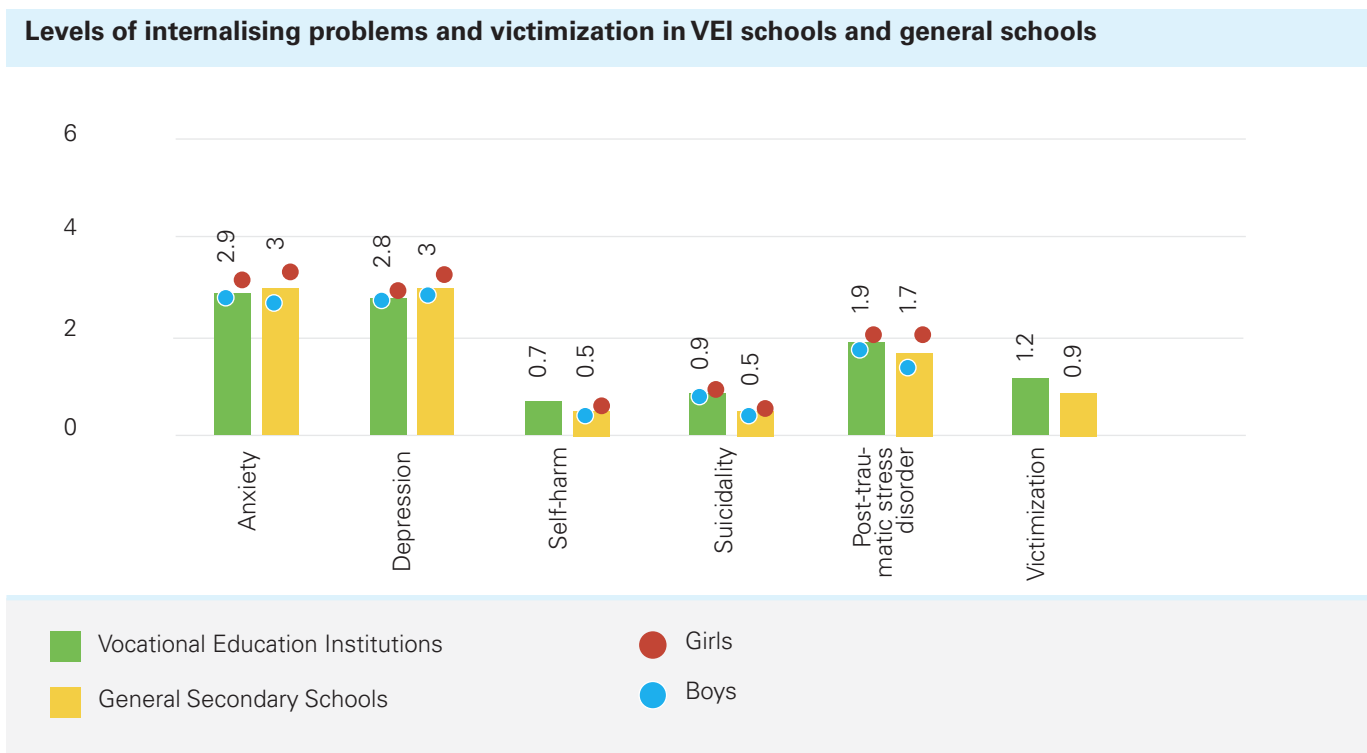


Figure 7.



4.3. The Influence of School Policies on School Connectedness

Donetsk and Luhansk.

The safe school concept, which is comprised of the principles of child-friendliness, school safety and a protective learning environment has been identified as UNICEF’s entry point to support national education reform in Ukraine (UNICEF, 2017). Additionally, focus will be lent to developing competency-based teaching approaches and creating inclusive education opportunities for vulnerable children (UNICEF, 2017), which are in line with the student-centred approach of the New Ukrainian School (Ukraine MoE, 2016).

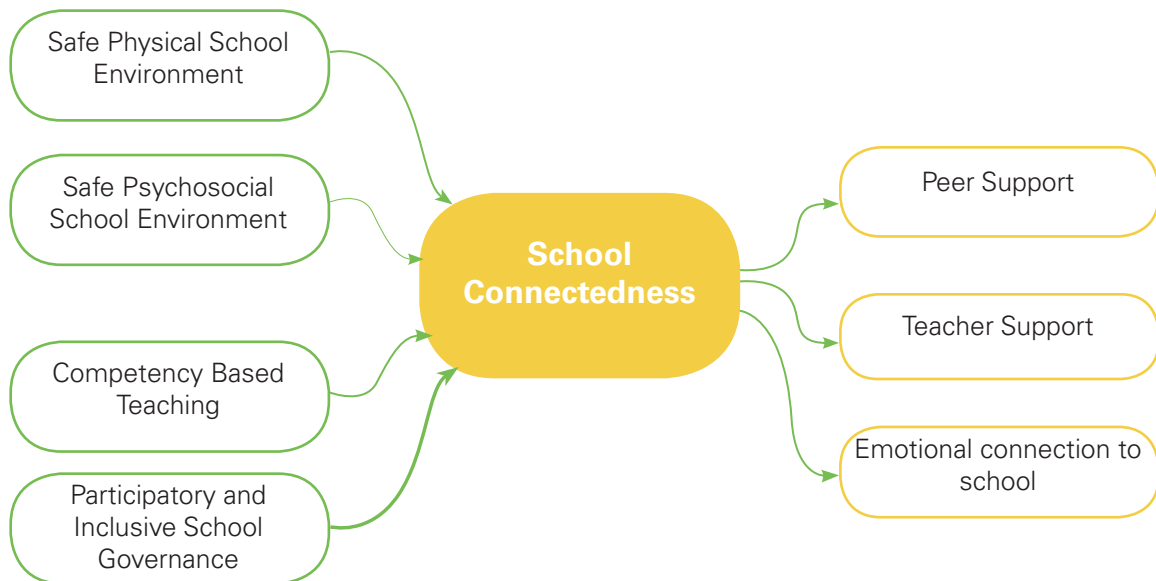
Previous iterations of USE (Lordos et al., 2019;

Connected Adolescents Report), have demonstrated that school connectedness in general schools is driven by four indicators: safe physical school environment, safe psychosocial school environment, competency-based teaching and participatory and inclusive school governance. This allows school connectedness to be used as a measure of educational reform implementation. These results were replicated in VEI.

Participatory and inclusive governance is the strongest predictor of school connectedness for VEI students, underscoring its importance for social connectedness within schools. As seen in general schools, gender does not influence the effect that the four policy indicators

Figure 8.

Predictive model showing impact of School Policies on School Connectedness in VEI students.



- Components of school connectedness
- ≡ Thicker arrows signify a stronger pathway
- ↑ Positive Relationships

4.4. Conclusion

have on school connectedness.

VEI students experience less support from their peers, feel less safe at school but observe a lower frequency of school conflicts. These are compounded by lower physical and psychosocial safety in VEI students, although these are attributed to demographic differences in the student population (urbanity and gender, respectively) rather than due to differences in the type of school. VEI students also report a higher occurrence of bullying and victimisation. These observations highlight the importance of efforts to address violence within schools and to ensure that the school culture is violence free, alongside increasing the cohesion amongst students particularly in VEI.

75% of VEI students report that conflicts occur between students at their school compared **to 88% of general school** students.

22% of VEI students have been hit or kicked by other children; **35%** have been pushed.

This compares to just **14% and 27% of general school** students, respectively.

Although **teacher support is the same** across the school types, **75% of general school** students report that **conflicts** occur **between teachers and students** at their schools. Conversely, conflict between teachers and students was only reported by **62% of VEI** students.

In accordance with the role of VEI in the education of vulnerable youth, it has been demonstrated that the VEI respondents have a higher level of behavioural and internalising problems. School connectedness was shown to work as a protective factor in VEI students as it did in students from general secondary schools ([Figure 5](#)), predicting positive adolescent developmental outcomes. Connectedness reduces internalising and behavioural problems, bullying and victimisation. Also, school connectedness is a positive driver of perceived academic achievement, secondary school completion tendency and school safety. It also prepares students for positive civic participation and reduces their readiness for political violence.

School connectedness can function as a marker of new school policy implementation in VEI students, as was seen in general school students (Connected

5. RISK EXPOSURE

Adolescents Report).

VEI in Ukraine continues to have a social orientation, with an important role in social inclusion and in the education and protection of vulnerable groups¹⁰ (Radkevych, 2018; ETF, 2017). This highlights the potential of VET to contribute to the UNICEF output of strengthening the capacity of the education system to be inclusive, reaching the most disadvantaged areas and marginalised youth (UNICEF, 2017). In this context, it was found that VEI students report higher exposure to all types of abuse and victimisation.

The impact of these stressors on behavioural, civic and psychological outcomes was tested using predictive statistical modelling. It was observed that for VEI students, the outcomes are more sensitively defined by the risk factors (for example, family abuse has a more pronounced negative impact on psychosocial adjustment) indicating a heightened risk or fragility of these adolescents, but also that they stand to **benefit more from interventions** that minimise these risks.

Exposure to domestic violence, physical and psychological abuse are most common in VEI students.

VEI students:

10. Vulnerable groups include orphans and children without parental care, children with disabilities, children of military service members who died while on active duty. These groups constitute 30 to 50% of state VET institution enrolments in 2015/16 (Radkevych, 2018; EAP-CSF, 2018; ETF, 2017).

50% have been screamed at aggressively in the past. 27% have previously been hit, beaten or spanked by someone at home.

36% have been frightened by arguments between adults at home.

19% have been ashamed by adults' behaviour when under the influence of drugs and alcohol.

19% have witnessed physical fights at home.

General school students:

45% have been screamed at aggressively.

20% have been hit, beaten or spanked.

34% have been frightened by arguments between adults.

13% have been ashamed by adults' behaviour when under the influence of drugs and alcohol.

11% have witnessed physical fights between adults at home.

Exposure to sexual abuse is 5% higher in VEI students than their counterparts at general schools, with between 8% and 10% of VEI students reporting previous exposure to any of the types of sexual abuse asked about in this survey.

5.1. Understanding the Profile and Environment of VEI Students

For students in Donetsk and Lugansk, the overall level of conflict exposure for students is the same independent of the type of school (Figure 9). This overall measure of conflict exposure is made up of the impact from conflict and the exposure to military activities. On examining these components, we see that although the overall level of conflict exposure is the same, the nature of this exposure is different in the two types of schools.

Students in VEI report a higher direct impact from conflict than general school students. This indicator includes various adverse experiences caused by the conflict: separation of the family, a close relative or friend participating as a combatant, being injured or killed due to the conflict, displacement from home, and the family suffering economic hardship. In all these measures, VEI students report a higher frequency of impact from conflict than general secondary school students. Conversely, VEI students report a lower

exposure to military activities (seeing soldiers, heavy military equipment and seeing or hearing actual fighting) than students in other schools across Donetsk and Luhansk. This may indicate that students at VEI institutions have normalised their exposure to military activities. Further, the results reveal that the impact of conflict on the socioeconomic conditions and social support systems (family, friends) is exacerbated in VEI students. These sensitivities should be taken into account by teachers and staff at VEI, both in routine interactions with students as well as in an effort to provide a more supportive environment for these students.

The family environment of VEI students generally tends to be worse. Family income is lower in VEI students as is parents' education level. Furthermore, 21% of VEI students do not share a dwelling with their mother, while 49% do not share a dwelling with their father (for general secondary school students, these figures

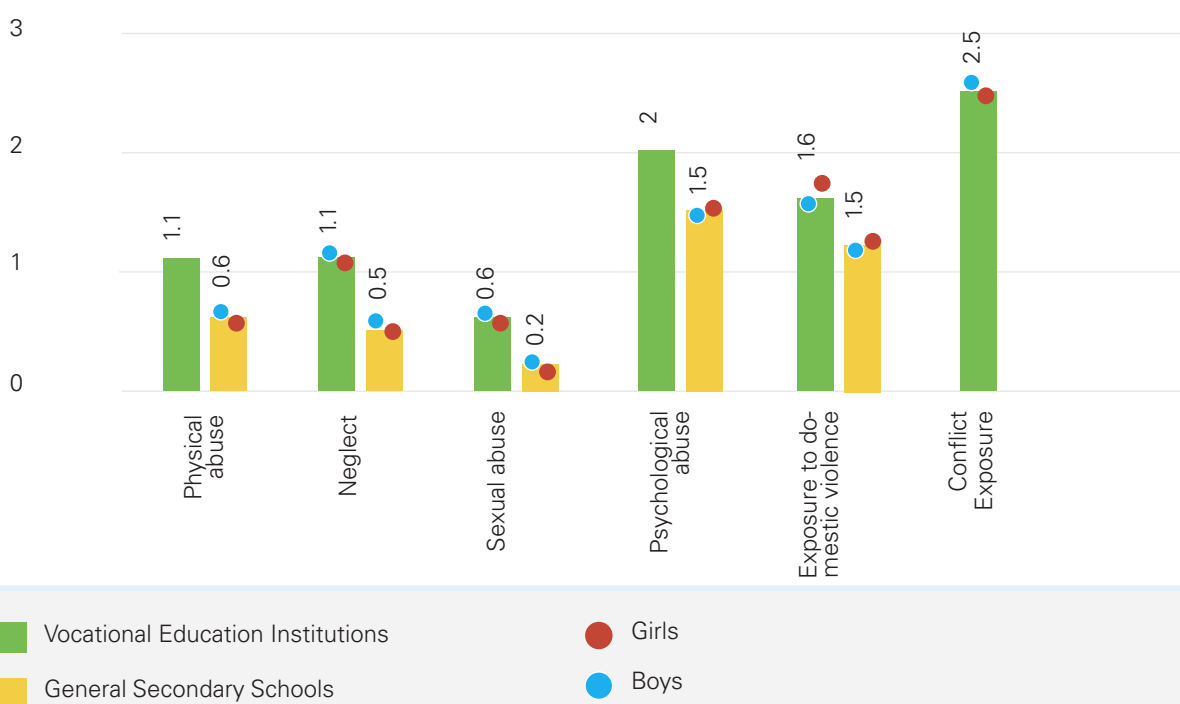
are 13% and 37% respectively). Adolescents in VEI experience more abuse in all its forms – abuse, neglect, sexual abuse, psychological abuse and domestic violence (Figure 9). In some cases, the score of abuse is double or even triple than that reported by students attending general schools. In addition, half of VEI students have been screamed at aggressively at home and one third of VEI students have been frightened by the arguments between adults at home. VEI students

also experience higher levels of in-school physical, verbal and relational victimization by their peers.

As was previously introduced, the findings illustrate the potential of VEI to contribute to reaching the most disadvantaged areas and marginalised youth. The results also confirm the longstanding role of VEI in the education and protection of vulnerable groups, and point to the importance of psychosocial support mechanisms within these schools.

Figure 9.

Levels of exposure to various risk factors in VEI and general schools



VEI students display significantly more behaviour problems (Figure 6), with higher scores in conduct disorder, aggression and normalisation of bullying. Boys in VEI in particular have higher incidences of unsafe sexual behaviour and substance abuse. As in previous findings (see Connected Adolescents Report) girls, irrespective of school type, exhibit more internalising problems (Figure 7). In both types of schools, anxiety and depression indicators have the highest scores in girls, implying that they are the most prevalent challenges and should be focussed on.

VEI students display less self-caring behaviours. Specifically, they have an overall higher body mass index (BMI), take part in less aerobic exercise, have a less balanced nutrition and fewer hours of sleep. This evidence contributes to previous work which has called for more attention to VEI students' health in order to promote normal physical development (Danylenko, 2016).

5.2. Understanding the Risk and Resilience of VET Students

Previous research (Lordos et al., 2019) aimed to establish if exposure to risks undermined developmental outcomes in adolescents in Ukraine. That analysis was replicated in the present study in order to investigate these relationships for adolescents at VEI.

The risk factors investigated were conflict exposure, victimisation, sociodemographic risk and family abuse. Psychosocial adjustment indicators were tested both as outcomes of these risk factors, and as mediators of the relationship between risk factors and downstream developmental outcomes. The psychosocial adjustment indicators investigated were internalising problems (depression, PTSD, self-harm, anxiety and suicidality; [Figure 7](#)) and behavioural problems (unsafe sexual behaviour, conduct disorder, aggression, substance use; [Figure 6](#)). The developmental outcomes tested were readiness for non-violent civic engagement, bullying, life satisfaction, perceived academic performance and school dropout tendency.

All risk factors derail perceived academic performance either directly, or by generating behavioural and internalising problems. Specifically, exposure to conflict, victimisation and family abuse generate behavioural and internalising problems in VEI students. These findings are similar to those observed in general school students (Connected Adolescents Report).

Family abuse emerges as an important risk factor for VEI students, more so than general school students. Family abuse directly decreases life satisfaction ([Figure 10](#), $\beta_{\text{VET}} = -0.12$), increases school dropout tendency and reduces academic performance ($\beta_{\text{VET}} = 0.06$, $\beta_{\text{VET}} = -0.09$ respectively). Exposure to abusive behaviour at home increases bullying tendencies ($\beta_{\text{VET}} = 0.09$), behaviour problems ($\beta_{\text{VET}} = 0.20$) and internalising problems ($\beta_{\text{VET}} = 0.21$). The effect of family abuse on dropout tendency, academic performance and bullying is not observed in students at general schools, indicating the heightened vulnerability of VEI students. This should be considered when handling VEI students who are disruptive, performing poorly, or considering dropping out: the root of the problems may be at home.

Conflict exposure increases behavioural and internalising problems in all students ($\beta_{\text{VET}} = 0.22$; $\beta_{\text{GS}} = 0.11$, and $\beta_{\text{VET}} = 0.10$; $\beta_{\text{GS}} = 0.11$, respectively). The effect on behavioural problems in VEI students is twice as big than the effect in general secondary school students ([Figure 10](#)).

Students who have been victimised are more likely to be involved in bullying others. Victimization increases bullying directly ($\beta_{\text{VET}} = 0.41$, $\beta_{\text{GS}} = 0.48$) and by increasing behavioural problems ($\beta_{\text{VET}} = 0.34$, $\beta_{\text{GS}} = 0.20$) which are also drivers of bullying ($\beta_{\text{VET}} = 0.59$, $\beta_{\text{GS}} = 0.54$). In addition to triggering these externalising, anti-social behaviours, victimisation also leads to internalising problems in all students ($\beta_{\text{VET}} = 0.44$, $\beta_{\text{GS}} = 0.34$).

In VEI students, sociodemographic risk decreases life satisfaction ($\beta_{\text{VET}} = -0.08$). In all students, sociodemographic risk is associated with lower academic performance ($\beta_{\text{VET}} = -0.08$, $\beta_{\text{GS}} = -0.22$), while in general school students, sociodemographic risk poses an additional risk of increasing school dropout tendency ($\beta_{\text{GS}} = 0.06$).

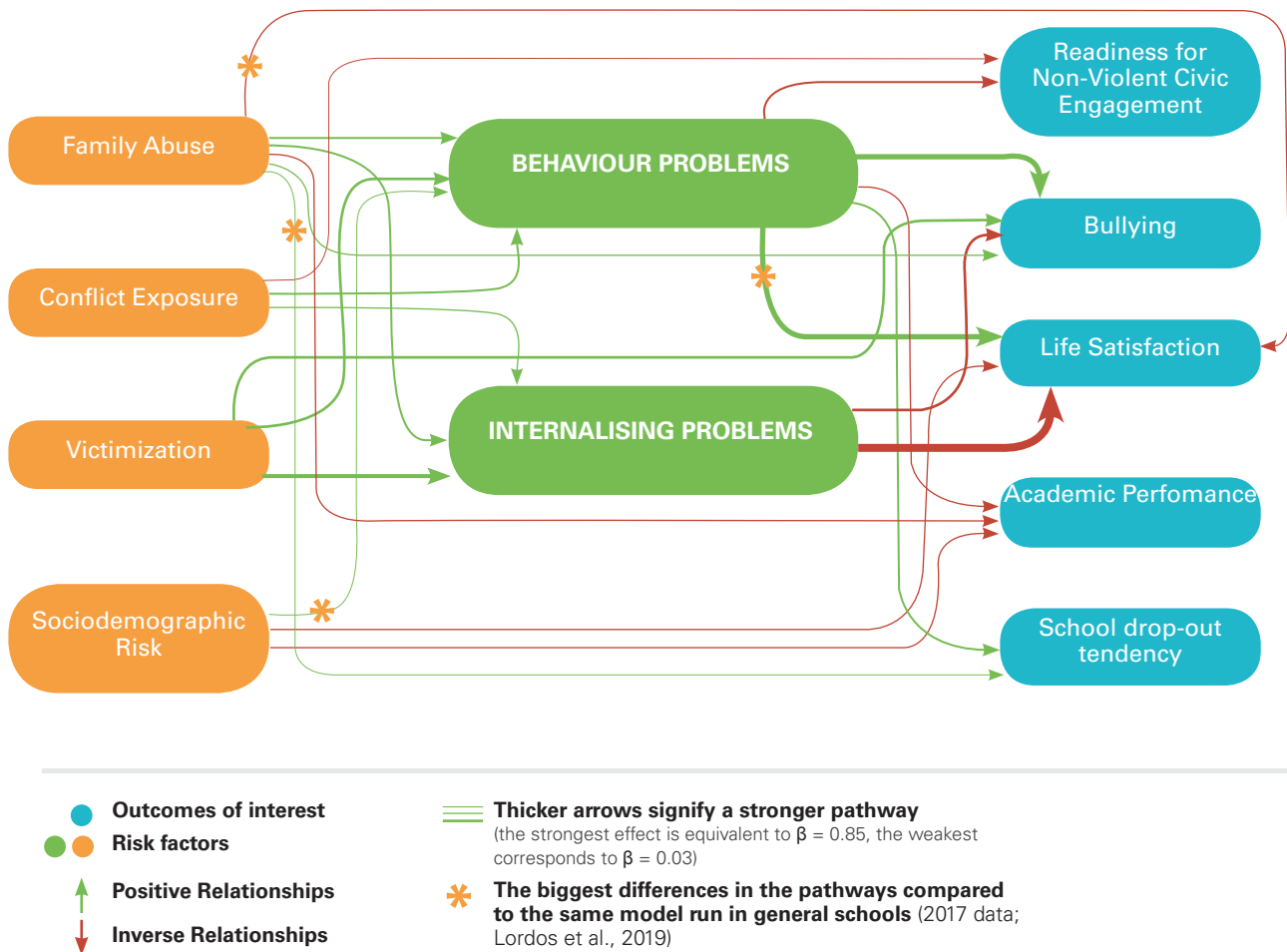
For adolescents from VEI, behavioural problems are strong drivers of increased life satisfaction ($\beta_{\text{VET}} = 0.60$), presenting a troubling association between perceived life quality and indulgent, risky behaviours. Further, VEI students are more supportive of violent civic action if they exhibit behavioural problems ($\beta_{\text{VET}} = 0.15$) and are more likely to bully their peers ($\beta_{\text{VET}} = 0.59$). These observations are not striking, as behavioural problems are defined as a combination of substance use, unsafe sexual behaviour, alongside aggression and conduct disorder in this context.

These findings indicate that for VEI students, behavioural problems have effects extending beyond their personal development (i.e. academic prospects) and into their immediate community or environment (i.e. violent citizenship tendencies and bullying).

One of the strongest associations in all students is the reduction of life satisfaction by internalising problems. This is not surprising, given that internalising problems encompass anxiety, suicidality, depression and PTSD. This pathway is stronger in VEI respondents ($\beta_{\text{VET}} = -0.85$, $\beta_{\text{GS}} = -0.68$).

Figure 10.

Risk Exposure Structural Equation Model



Contrary to mainstream perceptions, these results imply that VEI students **are more fragile than general school students**, since the outcomes are much more sensitively defined by the risk factors. The silver lining

is that, because the outcomes are more strongly dependent on the risk factors, we expect to see a much stronger improvement on these outcomes if the underlying risk factors are addressed and reduced.

5.3. Conclusion

VEI students were found to have higher levels of environmental risk exposure factors, particularly in terms of family abuse and victimisation by their peers. These adolescents also have a higher sociodemographic risk. The risk of family abuse causing behavioural problems and internalising problems, which subsequently influence developmental outcomes, is similar regardless of the type of school. VEI students have an added risk when family abuse exists, as it directly influences academic achievement and life satisfaction. These findings necessitate a continuing role for VEI in social inclusion, to achieve child-centred

education that reaches all adolescents in Donetsk and Luhansk.

Exposure to domestic violence, physical and psychological abuse are most common in VEI students.

VEI students:

19% have been ashamed by adults’ behaviour when under the influence of drugs and alcohol.

19% have witnessed physical fights at home.

General school students:

13% have been ashamed by adults' behaviour when under the influence of drugs and alcohol.

11% have witnessed physical fights between adults at home.

VEI students are more likely to develop undesirable psychosocial outcomes, such as suicidality or self-harm. The results demonstrate that an increase in the risks will lead to a greater increase in the negative outcomes (e.g. behavioural problems are more likely to lead to school dropout, while the effect of internalising problems on life satisfaction is much worse). Conversely, a decrease and mitigation of these risks will have a greater decrease in the negative outcomes in VEI students. As previously alluded to, this shows the importance of psychosocial support within VEI (particularly in the East), complementing existing approaches that exist through UNICEF programmes (UNICEF, 2017).

By prioritising the mitigation of key risk factors (e.g. internalising behaviours, behavioural problems and

factors such as family abuse and victimisation which drive these), a strong impact on life satisfaction and positive civic engagement is expected.

VEI students:

19% have been left hungry or thirsty even when there has been enough food for everyone.

14% have worn dirty, torn clothes or clothes that were not warm enough, or shoes that were too small even at times when it was possible to get better ones.

17% report that they have previously not had adequate care when sick.

General school students:

9% have been left hungry or thirsty.

6% have worn dirty, torn clothes, clothes that were not warm enough or shoes that were too small.

9% report previous inadequate care when sick.

6. CIVIC DEVELOPMENT IN VOCATIONAL EDUCATION INSTITUTION STUDENTS

The capacity to better support a sustainable civic engagement in adolescents is a key UNICEF outcome (UNICEF, 2017), complementing the New Ukrainian School concept which aims to develop social and civic competences in secondary school graduates, allowing them to effectively and constructively participate in society (ETF, 2017). In this study, the civic participation of VEI students was lower than that of their peers. Adolescents from VEI schools also reported higher tendencies for political violence and violent civic engagement. VEI students have lower support for social justice (support for human rights and gender equality and multicultural outlook).

While **82% of general school** students are more likely to agree that violence worsens social divisions and does not solve problems, this figure drops to **75% for VEI students**.

6.1. Investigating Civic Development in VEI Students

It was found that VEI students have lower skills for civic participation compared to their peers and show less readiness for civic participation (Figure 4). These students also have a higher readiness for political violence (Figure 4) and are more likely to support violent civic engagement in the presence of risk factors (see Section 5.2). Though boys overall tend to have a higher readiness for political violence, girls at general secondary schools are less likely to display this trait than their counterparts at VEI (Figure 4). VEI students also display higher callous unemotional traits, conduct disorder and aggression even once demographic differences in the student population have been accounted for (Figure 6). Given these observations and considering the findings previously described, violence prevention programmes merit focus in VEI curricula.

6.2. Conclusion

Increased tendencies for political violence and a lower support for social justice in VEI students indicate that violence prevention and inclusive civic behaviours should be integrated into VEI teaching to ensure constructive participation in the future. Previous

23% of VEI students are willing to resort to violent means to change the current conditions in their community or society in general, compared to **19% of general school** students.

41% of adolescents attending **VEI** believe that demanding equal pay for equal work for women is absolutely essential, compared to **56% of general school** students.

27% of VEI students agree that having the freedom to change, practice, worship or teach any religion is absolutely essential, as opposed to **39% of general school** students.

51% of VEI students believe in having an equal right to counsel in front of the law for all, compared to **66% of their counterparts at general schools**.

Support for social justice is significantly higher in students of general secondary schools (Figure 4). This difference is driven largely by a higher support for human rights followed by a higher gender equality mindset. Smaller differences also exist in multicultural outlook, which is also lower in VEI students. The VEI system therefore has a longer way to go to achieve positive citizenship development.

28% of VEI students believe that having the freedom to express one's sexual orientation and gender identity is absolutely essential, compared to **42% of general school** students.

30% of VEI students believe in the freedom to choose to have an abortion compared to **42% of general school** students.

research observed that VEI staff give emphasis to citizenship and positive attitudes (Zinser, 2015), and our results highlight that these efforts should be reinforced and amplified.

7. LIFE SKILLS

Overall, students from VEI scored lower in all measured life skills compared to their peers at other schools (Figure 11, Figure 12). These findings are important because the New Ukrainian School concept (Ukraine MoE, 2016) defines ten key competencies that secondary school graduates must obtain, which include: learning and flexibility, entrepreneurship, civic competencies for constructive participation, cultural literacy and understanding cultural diversity. For these competencies, certain key skills have been identified, including critical thinking, emotion regulation, creativity, problem-solving, decision making and collaboration. The curriculum of VET will be shaped by the requirement to develop these skills among VEI students (ETF, 2017).

Lower life skills scores in VEI students are observed despite the two samples being controlled for age and other demographics, indicating that these adolescents lag behind their counterparts at general schools in skills development. The biggest discrepancies in scores of VEI students compared to students at general secondary schools were found in critical thinking and social communication. It was also found that VEI students do

not display dominant life skills categories¹¹, but have either deficient, moderate or outstanding levels of all the life skills measured.

Overall, VEI students have good scores in kindness, distress tolerance and problem solving (score of 6.0 or above). However, they are doing less well in creativity and civic participation (scores below the midpoint of 5 out of 10). These results imply that creativity and civic participation should be prioritised. Interventions should leverage the strengths of VEI students such as kindness and distress tolerance and channel these strengths into building creativity and civic participation.

In general school students, we see that girls outperform boys in creativity, negotiation, respect for diversity, cooperation, kindness and social communication. This gender difference is not observed in the VEI sample, where the only differences are that girls outperform boys in kindness, but boys outperform girls in creativity. Much like in general schools, VEI boys have higher distress tolerance, decision making and critical thinking than girls.

11. In the former (see The Acquisition, Development and Impact of Life Skills on Ukrainian Adolescents Report), adolescents were grouped into five categories based on the profile of their life skills scores. The groups were: deficient, moderate or outstanding in all life skills, or dominant in either self-direction or collaborative skills. In the VEI sample, these groups were not discovered by the same statistical grouping algorithms.

Figure 11.

Levels of Life Skills in students of VEI and General schools

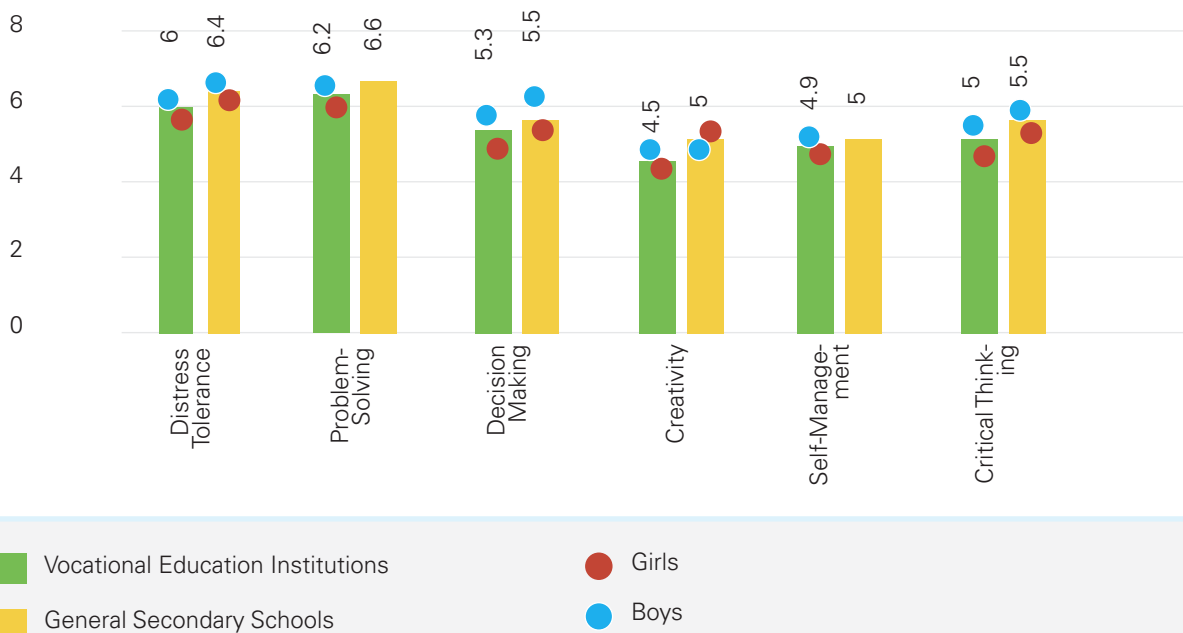
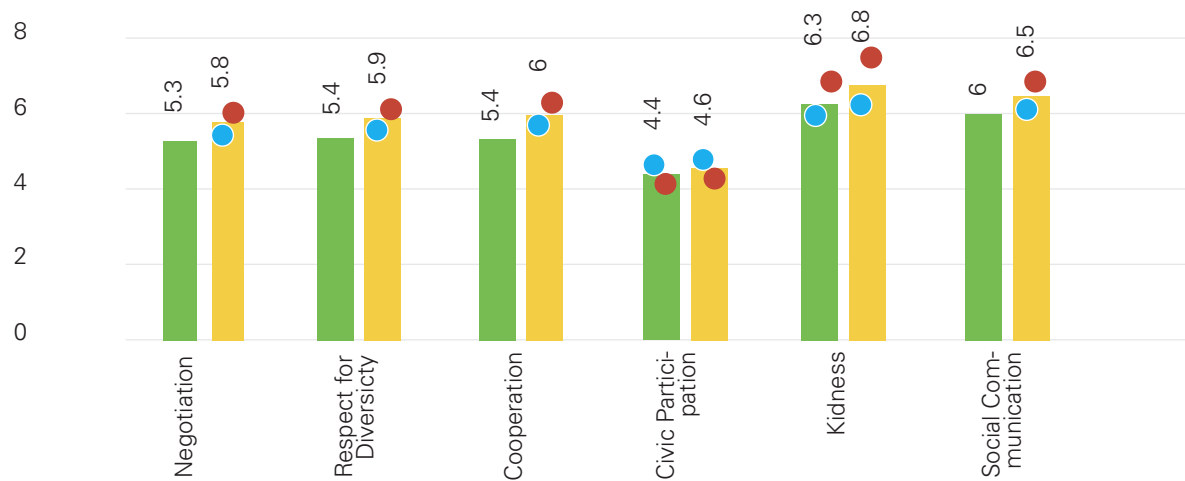


Figure 12.

Levels of Life Skills in students of VEI and General schools



■ Vocational Education Institutions

● Girls

■ General Secondary Schools

● Boys

8. MAIN FINDINGS AND RECOMMENDATIONS

The results of this survey motivate the following conclusions and policy implications:

- **Increasing school connectedness should be one of the goals of VET reform.** It is a key driver of VET students' academic prospects, psychosocial and civic development, all of which are lower in VET students. Our recommendation for VET is to work particularly on relationships between peers because the score for peer support is distinctly lower than that seen in students at general secondary schools. Achieving increased peer support and school connectedness is expected to have positive downstream effects: reducing victimisation, reducing internalising behaviours, increasing life satisfaction and academic achievement.
 - **School connectedness should be adopted as an indicator of VET transformation,** much like in general schools. The third iteration of SCORE will track the levels of school connectedness in several schools in the region to monitor the progress towards outcomes.
 - **VET students need to be protected from risk factors originating in the home.** VET students were found to have higher levels of psychological, physical and sexual abuse compared to general school students, as well as neglect and domestic violence. VET therefore have a responsibility to provide a safe and friendly environment for these adolescents and teachers must be equipped to handle the larger percentage of children who face serious abuse at home.
 - **Psychosocial support must be prioritised in VET institutions,** for two reasons. Firstly, because internalising problems and behavioural problems are higher in VET students than in general school students. Secondly, because VET students were found to be much more likely to develop these problems in the presence of risk factors (e.g. family abuse, victimisation, conflict exposure, all of which are higher in VET students). Psychosocial support and activities to promote mental health and wellbeing
- are expected to increase adolescents' capacity to respond to risk exposure, as well as allowing them to achieve their full potential within education and development. These support structures should take into account that boys in VET are reporting significantly higher incidences of neglect and sexual abuse, but girls are reporting higher incidences of domestic violence.
- **Gender-specific programming can target psychosocial and civic issues.** Girls have higher anxiety, depression, suicidality and post-traumatic stress, while boys report higher incidences of unsafe sexual behaviour, substance use, aggression, normalisation of bullying and readiness for political violence. Given that VET students are predominantly urban males, an entry point for changing these scores might be to use male role models from their communities as examples of successful adult men.
 - **Competency-based teaching requires specific focus in the new era of VET,** to close the gap between the quality of the VET system and the general school system. The modernisation of VET teaching requires a student-centred approach. Teachers should also be made aware of the strengths and weaknesses of VET students discovered in studies such as this, allowing them to reach their full potential.
 - **Civic education and development of positive civic traits should be incorporated into VET curricula.** Approaches tackling the justification of violent action should be prioritised, followed by programmes which increase awareness of and support for human rights and gender equality. VET students' highest life skill score was kindness but their lowest was civic participation skills: these particularities must be taken into account when designing civic education curricula and interventions.

9. APPENDIX

9.1. Indicator Descriptions

Indicator	Indicator Description
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 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	All the necessary school conditions that would ensure 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 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	Includes 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.

Table 1. **Question items of the School Connectedness indicator.**

School Connectedness	Peer Support	I can count on my friends when things go wrong
		My friends are very responsive to my personal needs
	Teacher Support	The teachers at my school provide me the support and encouragement that I need
		The teachers at my school are responsive to my personal needs
	Emotional Connection to School	I feel close to people at this school
		I am happy to be at this school

Table 2. **Question items of the indicators relevant to the safe school policies.**

Competency-based Teaching	Our lessons at school include group work and open discussions
	In our school, relations between teachers and students are positive and friendly
	Through classes in our school, students are encouraged to develop critical thinking and problem-solving skills
	Teachers at our school are motivated and committed to their work
	Our school and teachers care about what we really learn, not just on going through the curriculum and passing exams
Participatory and Inclusive School Governance	My opinion is valued and heard in the planning of school life
	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
	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
	Parents take an active part in the life of the school
	In our school, students from both genders and all social backgrounds can openly express their views and be heard by school authorities
Safe Physical School Environment	Food in school canteen is healthy and nourishing
	Our school has adequate playground and sports facilities
	Temperature at school is comfortable during the whole year
	Our school had modern equipment for interactive learning
	Bathrooms in our school are clean and adequately equipped

Safe Psychosocial School Environment	Our school has an active anti-violence campaign and has clear mechanisms how to react to cases of bullying and violence
	In our school there is time to rest and interact with friends
	Our school provides access to extra-curricular activities
	There is psychosocial support available at our school, for students who need it
	In our school, everyone is encouraged to be their own person and diversity is celebrated

9.2. Key Terms and Abbreviations

VET	Vocational Education and Training
VEI	Vocational education institutions
GS	General School
MoE	Ministry of Education and Science of Ukraine
β	Standardised regression weight (or beta-weight)
Safe School Policies	The policies which constitute the four key strategic elements of education reform in Ukraine. These are referred to as the indicators: competency-based teaching, inclusive school governance, safe physical and psychosocial school environment

9.3 Demographic Composition of Sample

Table 3. **Demographic distribution of sample used in this study. Demographics are given as a percentage of the total of each institution type.**

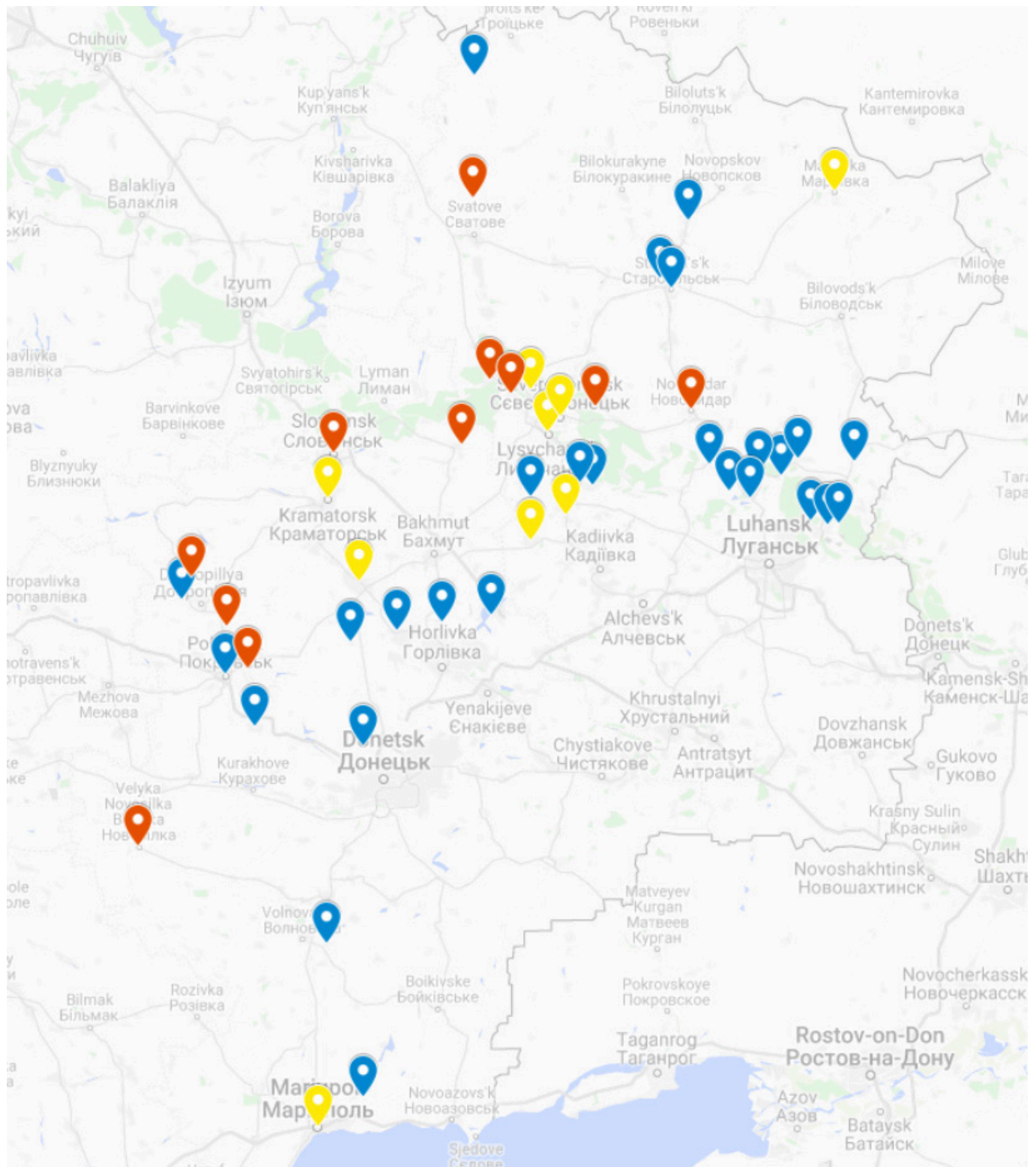
		VET Schools (N=3490)				General Secondary Schools (N=3799)			
		Donetsk Oblast		Luhansk Oblast		Donetsk Oblast		Luhansk Oblast	
13-15 years old	Male	403	11.5%	162	4.6%	564	14.8%	549	14.5%
	Female	195	5.6%	100	2.9%	680	17.9%	688	18.1%
16-19 years old	Male	898	25.7%	636	18.2%	315	8.3%	326	8.6%
	Female	528	15.1%	568	16.3%	378	9.9%	299	7.9%

9.4. Location of Institutions Surveyed

Figure 3.

Localities of schools surveyed.

Red pins: locality contained a VET institution; Blue: locality contained a general school; Yellow: locality contained both a VET institution and a general school.



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