

POSITIVE YOUTH DEVELOPMENT AND MENTAL HEALTH AMONG BULGARIAN ADOLESCENTS: THE PROTECTIVE ROLE OF CONFIDENCE AND CONNECTION

Anna Alexandrova-Karamanova

*Institute of Population and Human Studies
Bulgarian Academy of Sciences*

Sofia 1113, Acad. Georgi Bonchev St., Bl. 6, Fl. 5/6, Bulgaria

annaalexandrova@yahoo.com

Abstract. *Positive Youth Development (PYD) focuses on the strengths and positive qualities and outcomes in young people. Lerner's 5Cs model defines positive development by five aspects: Competence, Confidence, Connection, Character, and Caring. Research has demonstrated that the 5 Cs and other PYD dimensions are positively associated with positive mental well-being and negatively associated with mental health problems in adolescents. The aim of the study is to examine the levels of the 5Cs of Positive Youth Development and indicators of mental health (depression, perceived stress, and psychosomatic complaints) and to explore their relationships in a representative sample of Bulgarian middle adolescents (N=1517). Data from the Bulgarian 2017/2018 Health Behaviour in School-Aged Children (HBSC) study were utilized. Measures included the Positive Youth Development Scale – short form, the Center for Epidemiologic Studies Short Depression Scale (CES-D-R-10), the Cohen Perceived Stress Scale (PSS-4), and the HBSC-Symptom Checklist. High prevalence of depression (35,6%), perceived stress (70,2%), and multiple recurrent psychosomatic complaints (57,5%) was found among Bulgarian adolescents, all being more prevalent in girls compared to boys. Depression, perceived stress, and psychosomatic complaints were significantly negatively associated with Confidence and Connection and these associations remained significant after being adjusted for gender and socioeconomic status. The proportion of explained variance by the 5Cs was 10% for depression, 14% for perceived stress and 16% for psychosomatic complaints. The identified protective effect of Confidence and Connection has important implications for implementing the 5Cs of PYD as an approach for promoting youth mental health and preventing mental health problems.*

Keywords: Positive Youth Development (PYD); depression; perceived stress; psychosomatic complaints; adolescents.

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INTRODUCTION

Positive Youth Development (PYD) is a positive approach toward adolescent development, focusing on strengths and positive qualities and outcomes, opposing the “deficit” view on the development of young people where adolescents are seen as “problems to be fixed” (Dimitrova & Wiium, 2021; Lerner et al., 2011). PYD can be understood in at least three ways: as a development process, as a philosophy or approach to developing programs for young people, and as examples of programs and organizations focused on promoting healthy or positive development of young people (Lerner et al., 2011). Key features of the PYD approach are developmental plasticity, or the potential of individuals for systematic change within the life cycle, and the environmental perspective in which social contexts (family, friends, school, community) are seen as resources for positive youth development (Lerner et al., 2011). The adaptive combination of the strengths of the plastic, developing individual with the characteristics of social contexts increases the likelihood of positive development and flourishing of young people.

Lerner’s 5Cs model (Lerner et al., 2013) is one of the influential PYD theoretical models (Shek et al., 2019) which defines Positive Youth Development by five aspects: *Competence*: positive view of one’s actions in domain specific areas; *Confidence*: a sense of overall positive self-worth and self-efficacy; *Connection*: positive bonds with people and institutions; *Character*: respect for societal and cultural rules, morality, and integrity; *Caring*: a sense of sympathy and empathy for others. According to the 5Cs model the presence of these five characteristics in the lives of young people contributes to the formation of the sixth C - *Contribution* - to self, family, community, and the institutions of civil society. The 5 PYD domains are interconnected and a healthy development in all of them is required for experiencing adaptive development (Geldhof et al., 2019).

Research has found that the 5Cs are associated with better mental health and well-

being, with healthy lifestyles, fewer risk and problem behaviours, academic achievement, and civic engagement (Dimitrova & Wiium, 2021; Lerner et al., 2013). Regarding mental health, both associations with negative and positive mental well-being indicators have been explored. The 5Cs and other PYD dimensions have demonstrated associations with depression (Gomez-Baya et al., 2022; Chi et al., 2020; Zhou et al., 2020; Leung et al., 2020; Milot Travers & Mahalik, 2021; Onyeka et al., 2021; Holsen et al., 2017), anxiety (Kozina et al., 2021; Tomé et al., 2021; Onyeka et al., 2021; Holsen et al., 2017), suicidal ideation (Leung et al., 2020), posttraumatic stress (Shek et al., 2021), physical and psychological symptoms (Tomé et al., 2021), as well as with general mental well-being (Tomé et al., 2021; Urke et al., 2021), life satisfaction (Fernandes et al., 2021; Holsen et al., 2017) and subjective happiness (Gomez-Baya et al., 2021). The general finding from these studies is that PYD dimensions are positively associated with positive mental well-being indicators and negatively associated with negative mental well-being indicators, though an exception has been observed regarding the relationship between anxiety and specific PYD constructs such as Caring (Kozina et al., 2021; Tomé et al., 2021; Holsen et al., 2017) and Competence (Tomé et al., 2021) which have been found to be positively associated in specific country or gender subsamples. Overall, it can be concluded that PYD dimensions have a protective effect with respect to adolescent mental health risks and illnesses, which we also expect to find in the present study.

It is noticeable that most studies have focused on depression as one of the most common mental disorders and a major public health problem. Within the life cycle, depression becomes increasingly more prevalent in adolescence, with depression rates increasing after the pubertal transition. There is a well-established gender difference with depression being more prevalent in females, which emerges in early adolescence and peaks in adolescence as a developmental period (Hankin, 2015; Salk et al., 2017). A prevalence rate of 29.2% for subthreshold depression and 10.5%

for depression have been reported in adolescents from 11 European countries (Balazs et al., 2013). Thus, recent years research agenda has focused on examining potential factors such as the PYD dimensions that could protect adolescents against depressive symptoms. The other mental health constructs of interest have induced lower research activity in regard to their relationships with PYD. We have identified only one study assessing the relationships between PYD and physical and psychological symptoms (Tomé et al., 2021) and no studies on the relationships between PYD and perceived stress.

The aim of the present study is to examine the levels of the 5Cs of Positive Youth Development and indicators of mental health (depression, perceived stress, and psychosomatic complaints) and to explore their relationships in a representative sample of middle Bulgarian adolescents.

METHODS

The present study is part of the 2017/2018 Health Behaviour in School-aged Children (HBSC) study – a World Health Organization collaborative cross-national survey conducted every 4 years since 1982, currently in 50 countries in Europe and North America. HBSC aims to study young people's well-being, health behaviours and their social context, analyzing patterns and trends of key health behaviours, health indicators and contextual variables at both the national and cross-national level. In addition to research and monitoring, HBSC aims to inform and impact on health promotion and health education policy, programmes and practice in order to improve the lives of young people across the world. Data are collected in all participating countries through self-report school-based surveys using a standard methodology. Participants include national representative samples of adolescents aged 11, 13 and 15 years with about 1500 participants per age group.

The HBSC survey instrument is an international standard questionnaire used by all participating countries. It collects data in mul-

tiples areas like health and well-being (e.g., life satisfaction, psychosomatic complaints, depression, perceived stress); health behaviours and health outcomes (e.g., eating, physical activity, overweight and obesity); risk health behaviours (smoking, alcohol and cannabis use, sexual behaviour); bullying, cyberbullying and fighting; family relationships and family support; peer relationships and peer support; perceived school performance, school-related stress, and support from teachers and classmates; socioeconomic status.

Methods and procedures utilized in the 2017/2018 Health Behaviour in School-aged Children study are described in detail in the HBSC 2017/2018 international study protocol (Inchley, Currie, Cosma, & Samdal, 2018). In Bulgaria data were collected in 2018 in 124 randomly selected schools from all 28 regions of the country through an online questionnaire. Permission from the Ministry of Education and Science and written informed consent by adolescents' parents were obtained. The response rate for the three age groups was 60.3% for 11-year-olds, 68.1% for 13-year-olds and 65.1% for 15-year-olds. The final sample comprised 4548 students, of whom 48.4% were males and 51.6% were females. The Positive Youth Development measure was used only in the 15-age group and therefore only data for 15-year-old middle Bulgarian adolescents were included in the present analysis. The 15-age group comprised 1517 participants of whom 685 (45,2%) were boys and 832 (54,8%) were girls.

Independent variables. The 5Cs characteristics of Positive Youth Development were explored as independent variables. They were measured through the Positive Youth Development Scale – short form (Geldhof et al., 2014). The scale includes the 5Cs Competence, Confidence, Connection, Character, and Caring, comprising 34 items in total. The Competence and Confidence scales use a 4-point Likert scale. The Competence scale comprises 6 items, e.g. I do very well at my classwork; I am better than others my age at sports. The Confidence scale comprises 8 items, e.g. I am very happy being the way I am. The other three scales are measured through a

5-point Likert scale. Connection comprises 8 items, e.g. I feel my friends are good friends. Character includes 6 items, e.g., Doing what I believe is right even if my friends make fun of me. Caring also includes 6 items, e.g., When I see someone being taken advantage of, I want to help them.

Outcome variables. The outcome variables in the study included three indicators of adolescent mental health: depression, perceived stress, and psychosomatic complaints.

Depression was measured by the Center for Epidemiologic Studies Short Depression Scale (CES-D-R 10) (Bradley et al., 2010) – a well-established validated instrument both in adults and in adolescents. It evaluates the frequency of 10 symptoms of depression during the past week through a 4-point scale ranging from 0 to 3 which includes the following response categories: “rarely or none of the time (less than 1 day)”, “some or a little of the time (1-2 days)”, “occasionally or a moderate amount of time (3-4 days)”, “all of the time (5-7 days)”. In the total score, ranging from 0 to 30, the higher values represent higher levels of depression. The score of 10 or higher out of 30 is considered as the cut-off for clinically significant depressive symptoms.

Perceived stress was evaluated through the Cohen Perceived Stress Scale – short form (PSS-4), (Cohen et al., 1983). It measures the frequency of 4 aspects of psychological stress in the last month through a 5-point scale ranging from 0 to 4 including the response categories “never”, “almost never”, “sometimes”, “fairly often”, “very often”. The scale has showed good internal consistency ($\alpha=0.72$) (Cohen et al., 1983). The total score ranges from 0 to 16, with higher values representing higher levels of perceived stress. Mean scores ranging from 5,40 to 7,05 have been identified in different studies (Vallejo et al., 2018) and a cut-off of 6 or higher out of 16 has been proposed for adverse level of stress (Malik et al., 2019).

Psychosomatic health complaints were assessed through the HBSC-Symptom-Checklist (Haugland & Wold, 2001; Ravens-Sieberer et al., 2008). The measure has been developed by the HBSC network to explore

a variety of health symptoms subjectively experienced by the individual, which may range from occasional health complaints to clinical manifestations and may impair well-being and everyday functioning. The scale includes eight somatic and psychological complaints: headache, stomachache, backache, feeling low, irritability or bad mood, feeling nervous, difficulties in getting to sleep and dizziness. It explores the frequency with which the student has experienced the symptom within the last 6 months through a 5-point scale ranging from 1 to 5, including the response categories “about every day”, “more than once a week”, “about every week”, “about every month”, “rarely or never”. The scale measures a unidimensional latent trait of psychosomatic complaints and has good test-retest reliability ($r=0.80$). The total score ranges from 8 to 40. In the present study the scale was reversed so that the higher values represent more psychosomatic complaints. HBSC evaluates the prevalence of multiple recurrent health complaints defined as experiencing two or more health complaints about every day or more than once a week.

Covariates. Two variables were included as covariates in the regressions: gender (male/female) and socioeconomic status of the family. Socioeconomic status was measured through the Family Affluence Scale, FAS-III (Torsheim et al., 2016) – a brief assets-based measure developed by the HBSC research network as a suitable indicator for assessing family wealth through child or adolescent self-report. The third revision includes 6 items: number of computers owned by the family, number of cars, number of bathrooms, number of travels/holidays abroad, having an own bedroom, and having a dishwasher. Higher values of the total score, ranging from 0 to 13, indicate higher socioeconomic status. The Family Affluence Scale III had shown high test-retest reliability ($r=0.90$) and consistency between child and parent report ($r=0.80$) (Inchley, Currie, Cosma, & Samdal, 2018; Torsheim et al., 2016).

Data were processed through IBM SPSS Statistics 22. Statistical methods used included descriptive statistics, independent samples

t-test, bivariate Pearson correlations and multiple hierarchical linear regressions. All constructs except gender were used as continuous variables. Statistical significance of results was considered at $p < 0,05$ (marked with one asterisk). Two and three asterisks indicate levels of statistical significance of $p < 0,01$ and $p < 0,001$, respectively.

RESULTS

Descriptive statistics for the 5Cs of Positive Youth Development and the indicators of mental health are presented in Table 1. The sum scores of the 5Cs scales have been averaged through dividing the total score by the number of items.

Descriptive results for the 5Cs of Positive Youth Development show that the mean for Competence almost equals the theoretical mean of the scale, while the means of the other four factors are relatively higher than the theoretical means of the scales. Although the sum scores of the scales have been averaged, comparisons are difficult to be made as the 5Cs scales not only differ in the number of items, but also in the type of Likert scale being used. Still, it could be seen that among 4-point scales Confidence has higher mean than Competence, and among 5-point scales

Caring has the highest and Character has the lowest mean.

Descriptive results for the mental health indicators denote that the maximum reported sum scores for depression and perceived stress are lower than the theoretical maximum scores, showing that there are no extreme manifestations of stress and depressive symptomatology among the studied adolescents. The means for depression and psychosomatic complaints are quite low on the scales. The mean for depression is below the cut-off of 10 or higher out of 30, and the proportion of adolescents having clinically significant depressive symptoms is 35,6%. The percentage is 31,8% for boys and 38,6% for girls. The mean for perceived stress is above the cut-off of 6 or higher out of 16, and the proportion of adolescents experiencing adverse levels of stress is 70,2% (if a cut-off of 7 or higher is considered, the percentage is 56,1%). The proportion of perceived stress by gender is 66,4% for boys and 77,3% for girls (52,1% for boys and 59,3% in girls if the cut-off of 7 is considered). Regarding psychosomatic complaints, multiple recurrent health complaints (experiencing two or more health complaints about daily or more than once a week) is observed in 57,5% of adolescents. The percentage is 50,9% for boys and 62,9% for girls.

Table 1
Descriptive statistics for the 5Cs of Positive Youth Development (averaged) and indicators of mental health

	Min	Max	Mean	SD
<i>The 5Cs of Positive Youth Development</i>				
Competence	1,00	4,00	2,58	0,56
Confidence	1,00	4,00	2,94	0,53
Connection	1,00	5,00	3,36	0,72
Character	1,00	5,00	3,23	0,79
Caring	1,00	5,00	3,51	0,99
<i>Mental health indicators</i>				
Depression	0,00	26,00	8,59	4,80
Perceived stress	0,00	15,00	6,88	2,60
Psychosomatic complaints	8,00	40,00	18,72	7,04

Table 2

Gender differences in depression, perceived stress, and psychosomatic complaints

Mental health indicators	Mean		t	p
	Boys	Girls		
Depression	8,24	8,86	-2,355	,019
Perceived stress	6,64	7,07	-3,077	,002
Psychosomatic complaints	17,76	19,51	-4,865	,000

Table 3

Bivariate correlations between the 5Cs of Positive Youth Development and indicators of mental health

	Depression	Perceived stress	Psychosomatic complaints
Competence	-,148***	-,241***	-,278***
Confidence	-,305***	-,342***	-,342***
Connection	-,218***	-,264***	-,328***
Character	-,082**	-,122***	-,194***
Caring	-,099**	-,102***	-,174***

The observed gender differences in adolescent depression, perceived stress, and psychosomatic complaints are presented in Table 2. Analysis through independent samples t-test confirms the above-mentioned descriptive results. It shows that girls have worse mental health than boys regarding all three mental health indicators, with gender differences being most pronounced with respect to psychosomatic complaints and least pronounced with respect to depression.

Relationships between the 5Cs of Positive Youth Development and indicators of mental health explored through bivariate correlations are presented in Table 3. All relationships are negative, indicating that the characteristics of Positive Youth Development are associated with better mental health, i.e., with lower depression, lower perceived stress, and fewer psychosomatic complaints. Correlations vary from weak to moderate, being stronger with respect to Confidence and Connection and weaker with respect to Caring and Character.

To study the effects of the 5Cs on mental health indicators three multiple hierarchical

linear regressions were conducted. The results for depression are presented in Table 4. In Model 1 the independent variables include the 5Cs of Positive Youth Development and in Model 2 gender and socioeconomic status are added.

In Model 1, the proportion of explained variance in depression by the 5Cs is 10%. Depression is significantly negatively associated with Confidence and Connection, the association with Confidence being stronger. In Model 2, the associations between depression and Confidence and Connection remain significant after being adjusted for gender and socioeconomic status. Gender is found to be a significant predictor, demonstrating the relationship between female gender and higher levels of depression.

The effects of the 5Cs on perceived stress are presented in Table 5. In Model 1 the independent variables - the 5Cs of Positive Youth Development - explain 14% of the variance. Perceived stress is significantly negatively associated with Confidence and Connection, the association with Confidence being stronger.

Table 4

Effects of the 5Cs of Positive Youth Development on depression in adolescents
(hierarchical linear regression, adjusted for gender and socioeconomic status)

	Independent variables	Adjusted R ²	F	Beta	SE	t
Model 1	Competence	0,101	22,202***	0,035	,059	0,942
	Confidence			-0,291***	,047	-7,584
	Connection			-0,122**	,038	-2,937
	Character			0,067	,043	1,721
	Caring			0,005	,033	0,141
Model 2	Competence	0,103	16,495***	0,043	,060	1,145
	Confidence			-0,288***	,047	-7,497
	Connection			-0,118**	,038	-2,857
	Character			0,062	,043	1,578
	Caring			-0,006	,033	-0,169
	Gender			0,063*	,317	1,986
	Socioeconomic status			-0,016	,067	-0,517

Table 5

Effects of the 5Cs of Positive Youth Development on perceived stress in adolescents
(hierarchical linear regression, adjusted for gender and socioeconomic status)

	Independent variables	Adjusted R ²	F	Beta	SE	t
Model 1	Competence	0,140	33,878***	-0,068	,030	-1,867
	Confidence			-0,302***	,024	-8,111
	Connection			-0,109**	,019	-2,716
	Character			0,048	,021	1,290
	Caring			0,047	,017	1,305
Model 2	Competence	0,153	27,077***	-0,046	,030	-1,269
	Confidence			-0,303***	,024	-8,185
	Connection			-0,103**	,019	-2,592
	Character			0,041	,021	1,112
	Caring			0,027	,017	0,737
	Gender			0,095***	,159	3,192
	Socioeconomic status			-0,081**	,033	-2,758

Table 6

Effects of the 5Cs of Positive Youth Development on psychosomatic complaints in adolescents (hierarchical linear regression, adjusted for gender and socioeconomic status)

	Independent variables	Adjusted R ²	F	Beta	SE	t
Model 1	Competence	0,158	40,975***	-0,085*	,077	-2,365
	Confidence			-0,252***	,062	-6,756
	Connection			-0,158***	,050	-3,916
	Character			0,046	,055	1,219
	Caring			-0,002	,043	-0,058
Model 2	Competence	0,174	33,088***	-0,069	,077	-1,923
	Confidence			-0,248***	,062	-6,713
	Connection			-0,153***	,049	-3,818
	Character			0,032	,055	0,855
	Caring			-0,027	,043	-0,759
	Gender			0,136***	,410	4,754
	Socioeconomic status			-0,013	,085	-0,455

In Model 2, gender and socioeconomic status are added. The associations between perceived stress and Confidence and Connection remain significant after being adjusted for gender and socioeconomic status. Both gender and socioeconomic status are significant predictors of perceived stress, with female gender and lower socioeconomic status being related to higher levels of perceived stress.

The effects of the 5Cs on psychosomatic complaints are presented in Table 6. In Model 1 the 5Cs of Positive Youth Development explain 16% of the variance. Psychosomatic complaints are significantly negatively associated with Confidence, Connection, and Competence, the association with Confidence being stronger.

In Model 2, gender and socioeconomic status are added. Female gender is related to higher incidence of psychosomatic complaints. After having been adjusted for gender and socioeconomic status, the associations between psychosomatic complaints and Confidence and Connection remain significant but the association between psychosomatic complaints and Competence becomes non-significant ($p=0,055$).

DISCUSSION

The aim of the study was to examine the levels of the 5Cs of Positive Youth Development and three indicators of mental health: depression, perceived stress, and psychosomatic complaints, and to explore their relationships in a representative sample of middle Bulgarian adolescents.

Descriptive results revealed relatively high values of the 5Cs and especially of Confidence, Connection, Character and Caring, indicating that adolescents in our sample are well adjusted and are generally satisfied with their situation. Relatively high values of the 5Cs have been identified in other studies with European youth samples as well (Gomez-Baya et al., 2022; Urke et al, 2021).

For depression, the mean was lower compared to the theoretical mean of the scale and to the cut-off value of 10, with a proportion of 35,6% of adolescents having clinically significant depressive symptoms. Lower level of overall depression was expected, given that our sample was not a clinical but a representative sample of the general middle adolescent population. The results are consistent

with other studies showing similar levels of depression in youth such as the prevalence rate of 39.7% for depression and subthreshold depression in adolescents from 11 European countries (Balazs et al., 2013).

Contrary to the data for depression, descriptive results revealed high levels of perceived stress among Bulgarian middle adolescents. When a cut-off value of 6 was applied as proposed in the literature, a proportion of 70,2% of adolescents experiencing adverse levels of stress was identified. The mean for the perceived stress scale was also above the cut-off and close to the theoretical mean for the scale. These results may be linked to higher stressors in the social environment of Bulgarian adolescents at the country level given that negative factors such as poverty, income inequality, negative demographic trends, poor health, etc. are higher in Bulgaria compared to most advanced economies and to the European Union member states. If a cut-off of 7 is considered, the percentage drops to 56,1%. The latter value is similar to the proportion of 55,3% of adolescents who experienced moderate or high perceived stress in the non-clinical sample of a national youth cohort of Danish middle adolescents (Lindholdt et al., 2022).

Mean value for psychosomatic complaints was relatively low, indicating overall good psychosomatic health of Bulgarian adolescents. However, the prevalence of multiple recurrent health complaints defined as experiencing two or more health complaints daily or more than once a week was high and was observed in 57,5% of adolescents. In the international comparison with a total of 44 participating countries in the 2017/2018 HBSC study Bulgarian 15-year-old adolescents ranked second with respect to this indicator (Inchley et al., 2020).

Gender differences were identified in all three mental health indicators, with more girls experiencing higher levels of depression, perceived stress and psychosomatic complaints compared to boys. This is in line with studies consistently showing that depression is higher in females than in males (Hankin, 2015; Salk et al., 2017; Gomez-Baya et al., 2022). The

gender difference had been found also with respect to perceived stress (Kaczmarek & Trambacz-Oleszak, 2021; Steen et al., 2020) and psychosomatic complaints (Inchley et al., 2020; Tomé et al., 2021).

Analysis of relationships between the 5Cs of Positive Youth Development and depression, perceived stress and psychosomatic complaints showed negative correlations, indicating that the dimensions of PYD were associated with better mental health. Correlations varied from weak to moderate and were stronger with respect to Confidence and Connection and weaker with respect to Caring and Character.

Regression analyses demonstrated that the Confidence and Connection dimensions of Positive Youth Development were significantly negatively associated with depression, perceived stress, and psychosomatic complaints. Moreover, these associations remained significant after being adjusted for gender and socioeconomic status. The PYD dimensions explained 10% of the variance in depression, 14% of the variance in perceived stress, and 16% of the variance in psychosomatic complaints. Character and Caring did not show significant associations with the mental health indicators. Competence was significantly negatively associated with psychosomatic complaints but when covariates gender and socioeconomic status were entered in the regression model, the association was no longer statistically significant. Our results are consistent with findings from other studies (Tomé et al., 2021; Gomez-Baya et al., 2022) and with the theoretical assumption that adolescent strengths and positive assets are associated with adaptive and healthy development and can make young people more resistant to risks and negative outcomes. Furthermore, the protective role of Confidence and Connection towards experiencing mental health symptoms have been proven in youth samples from other European countries. Tomé et al. (2021) found Confidence and Connection to be positively associated with general mental well-being and negatively associated with physical and psychological symptoms and Gomez-Baya et al. (2022)

found protective effect of Confidence and Connection on depressive symptoms. Thus, young people who are confident, i.e., have a sense of mastery, positive identity, positive self-worth, general positive self-esteem, and expect positive experiences in the future, and young people who are connected, i.e., have healthy relations with community, friends, family, and school, are likely to be protected from mental health problems and illnesses even in light of adversity. The incorporated in Confidence and Connection psychological constructs of self-esteem, self-efficacy, optimism, social support, and being valued and accepted by others, have well-established relationships with positive mental well-being and their protective effects against mental health problems have been confirmed in the psychological research literature.

Among covariates in the regression analyses, gender was significant predictor of all three mental health indicators, indicating the gender differences in mental well-being discussed above. Socioeconomic status was a significant predictor only of perceived stress. Perceived stress was negatively associated with socioeconomic status with lower socioeconomic status being related to higher levels of perceived stress. The importance of socioeconomic status for experiencing perceived stress has been identified in other studies as well (Glasscock et al., 2013; Steen et al., 2020). Associations between health and socioeconomic status (SES) have been found to often take the form of a social gradient in health whereby each positive increment in social position is related to a reduced risk of illness and better health (Glasscock et al., 2013). As an underlying mechanism, it has been proposed that low-SES environments are stressful and longer exposure reduces individuals' reserve capacity to manage stress, thereby increasing vulnerability to negative emotions and cognitions (Gallo & Mathews, 2013).

Limitations of the study. Limitations of the study include its cross-sectional design which prevents us from making conclusions about the causal relationships between the variables. Another limitation is that only self-report measures were used in this study. It

would be valuable if data on adolescent mental health problems could also be collected from their significant others as well as from clinical assessments. The relatively high non-response rates among students may also be a source of bias.

Implications for practice. The findings from our study have important implications regarding the promotion of the 5Cs of Positive Youth Development, and especially the dimensions of Confidence and Connection, as an approach for promoting youth mental health in Bulgaria. In addition to existing efforts on addressing risk factors for mental health problems, developing young people's strengths through various youth programmes is necessary as it can be beneficial for protecting youth mental health by preventing depressive symptoms, psychosomatic complaints, and perceived stress. Such PYD focused programmes and youth mental health services should engage the partnership of youth contexts, such as the family, schools, neighborhoods, and a wider community to achieve optimal social and individual well-being.

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ASSOC. PROF. ANNA ALEXandroVA-KARAMANOVA, PHD

Institute of Population and Human Studies
Bulgarian Academy of Sciences
annaalexandrova@yahoo.com

Works in the area of health psychology, developmental & educational psychology and personality psychology. Her research focuses on mental health and well-being, risk health behaviour and healthy lifestyles, psychosocial determinants of health, patients' experiences, COVID-19, body image and appearance, adolescence and emerging adulthood, positive youth development, school environment, personality determinants of health and behaviour.

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