

Vrdoljak, G., Maglica, T., Šutić, L., Novak, M., Roviš, D., Mihić, J., & Gačal, H. (2024). Parenting Practices and School Climate: Association with the 5Cs of Positive Youth Development in Croatia. In N. Wium, D. Manrique-Millones, D. Miconi, & D. Stefenel (Eds.), *Addressing Social Justice: A Positive Youth Development Approach* (pp. 69–91). Fagbokforlaget. <https://doi.org/10.55669/oa311003>

Chapter 3

Parenting Practices and School Climate: Association with the 5Cs of Positive Youth Development in Croatia

Gabrijela Vrdoljak,^{1*} Toni Maglica,² Lucija Šutić,³ Miranda Novak,³ Darko Roviš,⁴ Josipa Mihić,³ and Hana Gačal³

¹ Faculty of Humanities and Social Sciences, Josip Juraj Strossmayer University of Osijek

² Faculty of Humanities and Social Sciences Split, University of Split

³ Laboratory for Prevention Research, Faculty of Education and Rehabilitation Sciences, University of Zagreb

⁴ Faculty of Medicine, University of Rijeka and Teaching Public Health Institute of Primorsko-goranska county

* Corresponding author: gpiri@ffos.hr

Abstract: Positive youth development (PYD) is based on five characteristics (5Cs): competence, character, confidence, caring, and connection. The literature suggests that all young people have certain strengths and that, with appropriate support in their surroundings, we can influence their development in a positive direction. The most important environments for adolescents to thrive are family and school. Therefore, the aim of this study was to examine the relationship between family and school factors, and positive youth development. The study was conducted within the broader project Testing the 5C Framework of Positive Youth Development: Traditional and Digital Mobile Assessment – P.R.O.T.E.C.T. funded by Croatian Science Foundation (UIP-2020-02-2852). Participants were 3,559 (54% female and 3% did not want to declare) first-year secondary school students ($M_{\text{age}} = 15.12$, $SD = .39$) from eight cities in Croatia. Assessment was conducted online during regular school hours and lasted an average of 40 minutes. The following measures were used: *Short Measure of the Five Cs*, PYD-SF which consists of five subscales: competence, character, confidence, caring, and connection; *Parental Monitoring*, with subscales: parental knowledge, youth disclosure, parental solicitation, parental control, and overcontrol; and *School climate questionnaire*. Several hierarchical regression analyses were conducted to analyse how parental monitoring and school climate predict PYD characteristics. The results showed that the components of positive development are associated with family and school factors, i.e., all predictors together explain between 13% and 40% of PYD characteristics. Although the parental monitoring variables were significantly associated with PYD, the strongest predictor was the school climate ($\beta = .21$ to $\beta = .27$). Also, school climate has proven to be a significant mediator between youth disclosure and PYD. The results emphasise the importance of developing parenting skills that support open communication, especially within the school context.

Keywords: parenting, school climate, PYD, 5C model, youth disclosure

Introduction

Positive youth development (PYD), with its main principle being that all youths have strengths and an inherent capacity for growth, development and thriving, is an increasingly emerging field of science and practice worldwide. The core ideas in PYD include developmental contexts, places, settings, ecologies, and relationships with the potential to generate support, opportunities, and resources for adolescents (Benson et al., 2007). One of the most widespread and validated frameworks for conceptualising PYD is the 5C model (Lerner, 2005), which emphasises the interaction of internal characteristics of youth that help them to thrive and the quality of support in their environment. Within the 5C model, *competence* reflects cognitive, social, academic, and vocational competencies, or positive views of one's abilities in domain-specific areas; *confidence* is an internal sense of overall positive self-worth and self-efficacy, the individual's view of own positive value and capacities, while *connection* refers to the individual's positive relationships with other people and/or organisations, positive bonds with peers, family, school, and community. *Character* includes the internalisation of social rules and norms, sense of right and wrong, and moral integrity, and finally, *caring* is seen as the capacity to sympathise and empathise with others, or to achieve closeness in one's social network (Dimitrova & Wiium, 2021; Lerner et al., 2021).

The literature suggests that there are some gender differences in PYD. Girls have higher scores on character, caring and connection, while boys have higher scores on competence and confidence (Gomez-Baya et al., 2022). Because girls are taught to be attentive from an early age, they have more strongly developed empathy later in life (Eisenberg & Lennon, 1983) and are also more likely to respect rules and social norms (Galasso et al., 2020). Girls are more oriented toward social relationships and perceive higher levels of classmate and close friend support than boys (Rueger et al., 2008). On the contrary, girls have a lower sense of competence and confidence. One of the more prominent reasons is the importance of physical appearance for a feeling of competence, especially in early adolescence. Furthermore, boys are more strongly affected by a feeling of incompetence in the school and academic environment, and girls by a feeling of incompetence in social relationships (Abela & Hankin, 2009). In general, boys express a higher level of self-confidence compared to girls (Marsh et al., 1991).

All models of PYD, including the 5Cs, share the idea of dynamic relationships between the individual and the context (Lerner et al., 2021). This idea is complementary to the Ecological Systems Theory's five systems in which development occurs: Microsystem, Mesosystem, Exosystem, Macrosystem, and Chronosystem (Bronfenbrenner, 1979). From the PYD perspective, the most interesting system so far has been the microsystem, more specifically the family and school context.

Studies of family risk and protective factors over the years have consistently emphasised the correlation between specific parental practices and family interactions with adolescent mental health (problems), well-being and positive youth development. There is a body of evidence from cross-sectional studies indicating that stable and supportive home environment, family attachment, cohesion, positive relationships, open communication, parental warmth, but also parental monitoring and satisfaction within the family form a protective family environment that promotes and protects mental health and well-being (Aguirre-Davila et al., 2021; Maglica et al., 2021; Vélez et al., 2019). Prospective longitudinal studies such as that of Alm et al. (2020) also support the idea that poor family relationships in adolescence may be a risk factor for mental health problems later in life. Studies from the PYD framework also indicate positive and significant correlations with parental engagement, warmth and autonomy support, strong relationships with parents (Bakhshae et al. 2016; Mohamed et al., 2017; O'Connor et al., 2010), parental responsiveness (Yu & Shek, 2021), parental monitoring, trust, absence of alienation, and communication with parents (Kaniušonyte, 2015; Novak et al., 2021).

Parenting practices include parental supervision of the child's behaviour and activities, the quantity and quality of communication, setting limits, and teaching norms, values, and goals (Dorius et al., 2004, Stattin and Kerr, 2000; Tharp & Noonan, 2012). The parent-child relationship based on parents' awareness of their child's activities represents a key parenting practice for young people's development (Kapetanovic & Boson, 2020). Stattin and Kerr (2000) emphasise that parental monitoring cannot be effective without positive exchange with the adolescents and their willingness to share information. Adolescent-driven, voluntary communication and disclosure emerges as one of the strongest protective factors for adolescent mental health, and some authors of prospective longitudinal studies have found that it predicts fewer depressive symptoms (Hamza & Willoughby, 2011) or the externalising of problems

(Kapetanovic et al., 2020). That being said, monitoring reflects proper attunement between parent and adolescent, at best based upon good communication and warm relationship. Adequate parental monitoring and control delays the initiation of risky activities, decreases adolescent substance use, diminishes risky sexual and delinquent behaviour of other kinds (Ryan et al., 2015; Tharp & Noonan, 2012). On the other hand, if adolescents see parental involvement in their life as intrusive, that can negatively affect developmental outcomes (León-del-Barco et al. 2019, De Kemp et al, 2006). Parent-initiated communication, asking questions, and solicitation, which are often related to monitoring and setting rules, should not be intrusive because adolescents can perceive them as overly controlling and threatening (Hawk et al., 2008), which in turn may have negative consequences on their development (Hessel et al., 2016).

The second micro-ecological context is school, with its importance for multiple domains of adolescent functioning like cognitive and social development, vocational development, identity formation, and peer relationships (Gomez & Ang, 2007). School represents the primary and natural setting for the development of personal and social skills that help adolescents to promote their health and well-being (Goldenberg et al., 2019; Tomé et al., 2019). Respecting the fact that adolescents spend most of their time in the school environment, school becomes a habitat for positive interactions and for opportunities that promote PYD. One of the constructs usually measured within the school context is school climate. It is a broad, multidimensional construct that includes physical security, individuals' relationships at school such as those with teachers, employees and parents, educational methods, and school physical environment (National School Climate Center, 2007). School climate dimensions such as teacher support, autonomy support and connectedness have been shown to be associated with PYD (American School Health Association, 2004; Bakhshae et al., 2016; Bundick & Tirri, 2014), predict future adolescent emotional health (Kidger et al., 2012) and purposefulness (Bundick & Tirri, 2014). In the study by Bakhshae et al. (2016), teacher support, along with parental engagement and autonomy, explained 40% of the variance in PYD. School feelings are also significantly influenced by adolescents' competence, and the 5Cs play an important role in promoting positive interpersonal relationships and adolescent well-being (Tomé et al., 2020).

Despite the growing literature on positive youth development and the importance of the family and school context for youth to thrive, positive youth

development has not yet been recognized as an important research question in Croatia. As a result, there are few studies (e.g., Gomez-Baya et al., 2022; Novak et al., 2021, Vrdoljak et al., 2023) examining positive youth development among Croatian youth. Additionally, in cross-cultural PYD studies, direct examinations of the family factors' contribution to PYD is uncommon (Bradley et al., 2021; Chen et al, 2019; Dutra-Thomé & Ponciano, 2021).

For this reason, this paper focuses on individual differences (i.e., gender) and family and school context as predictors of positive development among secondary school students in Croatia. The aim of this study is to examine how determinants of parental practices and school climate are associated with specific components of the 5C model.

Methods

Participants and Procedure

The research was conducted within the broader project: *Testing the 5C Framework of Positive Youth Development: Traditional and Digital Mobile Assessment – P.R.O.T.E.C.T.* funded by the Croatian Science Foundation (UIP-2020-02-2852). The sample presented in the paper consists of the first wave of the study, and participants were first-year secondary school students ($M_{\text{age}} = 15.12$, $SD = .39$) from eight cities in Croatia. There were a total of 3,559 students (54% female and 3% did not want to declare their gender). The sample included public schools¹: 39.5% of students were enrolled in grammar schools, 43.6% in four- or five-year vocational schools, and 16.9% students were attending three-year vocational schools.

The approval for the study was obtained from the Ministry of Science and Education, National Agency for Education, and the institutional ethics

1 In the Croatian education system, primary school lasts eight years. After primary school, students enrol in secondary school: grammar – gymnasium (which lasts four years) or vocational school (which can last three to five years). While grammar schools prepare students for university, vocational schools that last three years educate students for professions such as hairdresser, shoemaker, auto mechanic, florist... Four-year vocational schools are, for example, technical and business schools, and five-year vocational school is medical school. Most students in Croatia (99%) attend public schools, which are free.

committee. Because of questions related to mental health and risk behaviours, parents' active consent was sought for the participation of their children in the research. Before completing the questionnaire, participants were informed about the purpose of the study and were asked to give informed consent. Participation was completely confidential and voluntary. Assessment was conducted during regular school hours and lasted an average of 40 minutes. For each included class, the research coordinator provided detailed instructions and a link to online questionnaires on the SurveyMonkey platform.

Measures

A battery of instruments was applied within this project, but only the measures used for the purposes of this paper will be described here. All measures used were either constructed in Croatia or translated to Croatian and validated in several preliminary studies (e.g. Maglica et al., 2021), and their internal consistency was checked.

Parental Monitoring (Stattin & Kerr, 2000). The questionnaire contains 27 items and five subscales – Parental knowledge (knowledge about what their adolescents are doing and where they are), Youth disclosure (adolescent's voluntary sharing of information), Parental solicitation (gathering information about children's activities by asking the children themselves and talking with their friends), Parental control (setting rules that the adolescent must follow) and Overcontrol (too much control). Participants express an opinion on a Likert-type scale where 1 = None of the time and 5 = All of the time. Cronbach's alphas were between $\alpha = .76$ (Parental knowledge) and $\alpha = .87$ (Parental control).

Croatian school climate questionnaire (Velki et al., 2014) contains 15 items. The questionnaire is characterised by a one-factor structure and contains items that include sense of belonging and safety at school, relationship between teachers and students, atmosphere for learning, and parental connection with school and involvement in children's education. Participants express an opinion on Likert-type scale where 1 = Strongly disagree and 5 = Strongly agree. Cronbach's alpha was $\alpha = 0.92$, which is in line with the high internal consistency of $\alpha = .90$ found by Velki et al. (2014).

Short Measure of the Five Cs, PYD-SF (Geldhof et al., 2014). The questionnaire contains 34 items and five subscales – Competence (ability to master

various life domains, including academic excellence, social, and interpersonal skills), Confidence (overall positive outlook of oneself, high self-awareness), Character (ethical sense of right or wrong, respect toward social and cultural standards and integrity), Connection (positive and mutual relationships with important people and institutions) and Caring (compassion and sympathy for others). Each of the subscales that measure Competence, Confidence and Caring consist of six items, while the subscales of Character and Connection consist of eight items each. Participants express an opinion on a five-point Likert-type scale where 1 = not at all like me and 5 = just like me. Cronbach's alphas were between $\alpha = 0.70$ (Competence) and $\alpha = 0.90$ (Confidence). The reliability of subscales was in line with the studies by Maglica et al. (2021), who found Cronbach's alphas between $\alpha = 0.67$ (Competence) and $\alpha = 0.90$ (Confidence), and by Gomez-Baya et al. (2022), who found Cronbach's alphas between $\alpha = 0.67$ (Competence) and $\alpha = 0.86$ (Caring).

Demographic data were also collected, such as age, gender, where they come from, and which school they attend. The male gender is indicated in the databases with the number 1, and the female with the number 2.

Results

In order to elucidate research questions, a series of statistical analyses was conducted. Descriptive statistics are presented with normality tests and inter-correlations of variables used. Several hierarchical regression analyses were conducted to analyse how parental monitoring and school climate predict PYD characteristics. To examine the mediation effect of school climate on the relation between youth disclosure and PYD, a PROCESS macro procedure for SPSS (Hayes, 2013) was used.

Descriptive statistics, skewness, and kurtosis will be first presented in the results section (Table 3.1).

Table 3.1 *Descriptive Statistics, Skewness, and Kurtosis of all Measured Variables*

Variables	Male		Female		Total					
	M	SD	M	SD	M	SD	min	max	Skew	Kurt
Parental knowledge	3.70	.76	3.85	.74	3.77	.76	1	5	-.56	.01
Youth disclosure	3,61	.78	3.83	.88	3.72	.85	1	5	-.36	-.42
Parental solicitation	3.05	.88	3.41	.93	3.25	.92	1	5	-.08	-.50
Parental control	3.54	1.02	4.00	.89	3.79	.98	1	5	-.66	-.20
Overcontrol	2.30	.85	2.20	.90	2.25	.88	1	5	.51	-.24
School climate	51.14	11.19	50,67	10.40	50.76	10.78	15	75	-.44	.56
Competence	3.56	.65	3.33	.65	3.42	.67	1	5	-.33	.01
Character	3.59	.61	3.86	.53	3.73	.60	1	5	-.60	.80
Confidence	3.82	.78	3.46	.93	3.60	.90	1	5	-.60	-.16
Caring	3.74	.82	4.19	.70	4.00	.80	1	5	-.86	.73
Connection	3.56	.64	3.49	.67	3.51	.67	1	5	-.39	.11

Table 3.2 *Correlation Matrix of the Study Variables*

Variables	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. P. knowledge	.71**	.46**	.38**	-.21**	.38***	.14**	.43***	.21**	.31**	.36**	.07**
2. Youth disclosure	-	.53**	.37**	-.31**	.36**	.19**	.43**	.27**	.32**	.39**	.09**
3. P. solicitation		-	.48**	-.01	.22**	.16**	.30**	.14**	.29**	.32**	.17**
4. P. control			-	.10**	.16**	.02	.28**	.00	.27**	.11**	.20**
5. Overcontrol				-	-.22**	-.08**	-.22**	-.19**	-.13**	-.22**	-.03
6. School climate					-	.27**	.40**	.36**	.30**	.57**	-.05*
7. Competence						-	.25**	.56**	.13**	.53**	-.20**
8. Character							-	.25**	.64**	.44**	.14**
9. Confidence								-	.08**	.59**	-.24**
10. Caring									-	.34**	.20**
11. Connection										-	-.11**
12. Gender											-

Note. ***p < .001; **p < .01; *p < .05

The average values of the parental monitoring subscales were around the middle of the range, with the exception of the Overcontrol subscale, where average value was located in the lower part of the range. Average values for the PYD subscales were similar. The Caring subscale showed a slightly higher average value. The average value of the school climate scale was in the upper part of the range. The results also showed that variables have a normal distribution trend considering that the skewness is in the ± 3 and the kurtosis is in the ± 10 range (Kline, 1998).

Associations between parental monitoring, school climate, and PYD characteristics were tested by Pearson's correlation coefficients (Table 3.2).

The intercorrelation matrix showed that correlations between parental monitoring, school climate and PYD characteristics were mainly positive and significant, except for the overcontrol subscale, which was significantly negatively related to school climate and PYD characteristics.

Next, a hierarchical regression analysis was performed in order to investigate the effects of parental monitoring and school climate on PYD characteristics. We decided to include family and school variables in separate steps in the regression analysis to test whether the school context could explain differences in positive youth development beyond the family context. Because family context, i.e., parental monitoring, has a longer-lasting influence on adolescents than school climate, parental monitoring was included first in the regression model.

In the first step, gender was introduced because previous research indicates that there are differences between girls and boys in the average values of PYD components (Gomez-Baya et al., 2022). The results showed that girls have higher scores on the subscales of character and caring, while boys have higher scores on the subscales of competence, confidence, and connection. In the second step, parental monitoring measures were introduced. Youth disclosure and parental solicitation are positive predictors of all PYD characteristics. Parental knowledge was a positive significant predictor of caring, connection, and character. Parental knowledge was also a significant predictor of confidence, but this significance was very low in the second step, while it was no longer significant in the third step. Parental control was a positive significant predictor of character and caring and negative significant predictor of competence, confidence, and connection. Overcontrol significantly negatively predicted all PYD characteristics except competence. In the third

step the school climate was introduced. The school climate was the strongest positive predictor of positive youth development. All predictors together explained between 13% and 40% PYD characteristics.

Table 3.3 *Results of Hierarchical Regression Analysis Predicting PYD Characteristics*

Criterion	Model	R	R ²	F	β
Competence	1. step	.20	.04	134.65**	
	Gender				-.23**
	2. step	.31	.10	56.46**	
	Gender				-.23**
	P. knowledge				.01
	Youth disclosure				.13**
	P. solicitation				.15**
	P. control				-.06**
	Overcontrol				-.03
	3. step	.37	.13	69.05**	
	Gender				-.21**
	P. knowledge				-.03
	Youth disclosure				.10**
	P. solicitation				.14**
	P. control				-.06**
	Overcontrol				.00
	School climate				.21**
Character	1. step	.14	.02	63.98**	
	Gender				.14**
	2. step	.50	.25	170.40**	
	Gender				.08**
	P. knowledge				.23**
	Youth disclosure				.15**
	P. solicitation				.06**
	P. control				.10**
	Overcontrol				-.13**
	3. step	.55	.30	192.00**	
	Gender				.10**
	P. knowledge				.17**
	Youth disclosure				.12**
	P. solicitation				.04*
	P. control				.09**
	Overcontrol				-.10**
	School climate				.26**

Parenting Practices and School Climate

Confidence	1. step	.24	.06	183.58**	
	Gender				-.26**
	2. step	.40	.16	98.28**	
	Gender				-.26**
	P. knowledge				.05*
	Youth disclosure				.21**
	P. solicitation				.08**
	P. control				-.08**
	Overcontrol				-.11**
	3. step	.47	.22	123.86**	
	Gender				-.24**
	P. knowledge				-.01
	Youth disclosure				.17**
	P. solicitation				.07**
	P. control				-.08**
Overcontrol				-.07**	
School climate				.27**	
Caring	1. step	.20	.04	127.20**	
	Gender				.20**
	2. step	.41	.17	103.00**	
	Gender				.14**
	P. knowledge				.12**
	Youth disclosure				.10**
	P. solicitation				.10**
	P. control				.12**
	Overcontrol				-.08**
	3. step	.46	.20	109.72**	
	Gender				.16**
	P. knowledge				.08**
	Youth disclosure				.07**
	P. solicitation				.09**
	P. control				.11**
Overcontrol				-.05**	
School climate				.20**	
Connection	1. step	.11	.01	37.90**	
	Gender				-.11*
	2. step	.48	.23	154.22**	
	Gender				-.16**
	P. knowledge				.16**
	Youth disclosure				.15**
	P. solicitation				.23**
	P. control				-.08**
	Overcontrol				-.13**
	3. step	.64	.40	301.81**	
	Gender				-.19**
	P. knowledge				.06**
	Youth disclosure				.09**
	P. solicitation				.21**
	P. control				-.09**
Overcontrol				-.07**	
School climate				.46**	

Note. β = standardised regression coefficients; **p < .01; *p < .05

Given that youth disclosure was a significant predictor in all regression analyses and that its effect diminished when school climate was introduced, the mediating effect of school climate in the relationship between Youth disclosure and PYD was tested (see Figure 3.1). Additional theoretical assumptions can be found in literature: Hamza & Willoughby (2011) indicate that youth disclosure proves to be one of the strongest protective factors for adolescent mental health. Mediation was verified by the Hayes process (Hayes, 2013).

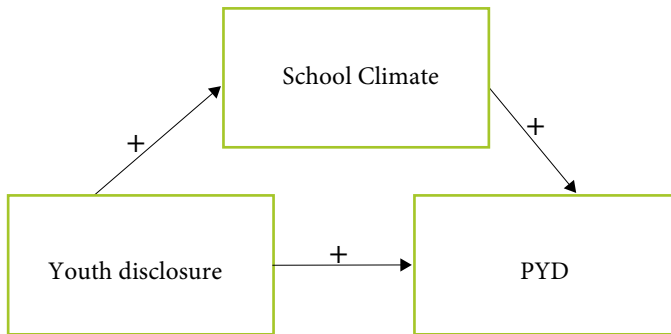


Figure 3.1 *Schematic Representation of the Hypothesised Mediation Model*

The analysis showed that school climate was a significant mediator in the relationship between youth disclosure and PYD, which was valid for all five characteristics of positive development: Competence ($z = .07, p = .00, CI\ 95\% = .08$ to $.13$ which excluded zero), Character ($z = .07, p = .00, CI\ 95\% = .08$ to $.12$ which excluded zero), Confidence ($z = .12, p = .00, CI\ 95\% = .10$ to $.15$ which excluded zero), Caring ($z = .07, p = .00, CI\ 95\% = .04$ to $.08$ which excluded zero) and Connection ($z = .07, p = .00, CI\ 95\% = .15$ to $.21$ which excluded zero).

Discussion

The present study examined the effects of parental monitoring and parents' interest in adolescents' daily activities, and effects of school climate on five characteristics of PYD in a large sample of Croatian adolescents, first-year

students in secondary schools. In addition, gender differences were taken into account. Regarding parental dimensions, it was found that males perceive significantly more parental control and solicitation, and report more parental knowledge and their readiness to disclosure. Gender differences were also found on certain dimensions of positive youth development. Male adolescents reported higher results on the dimensions of confidence, competence, and connection, while female adolescents showed higher results on caring and character dimension. When examining the contextual variables, it appears that school climate is the strongest predictor of positive youth development, while parental variables have different effects on each of the 5Cs. An interesting finding is that school climate is a significant mediator of the relationship between youth disclosure and positive youth development.

Gender Differences

Considering that positive youth development is not only the result of interactions in the microsystem, but also in other, broader ecological systems, it is not surprising that gender differences appeared in the 5Cs. Indeed, it appears that Croatian girls exhibit more indicators of character and caring, whereas Croatian boys exhibit more indicators of competence, confidence, and connection. The results are in line with previous research on Croatian adolescents (Gomez-Baya et al., 2022), except for the results related to gender and connection. The lower levels of connection that girls exhibit can be explained by the finding that girls are more affected by positive and negative social relationships and are more susceptible to interpersonal stress (Berk, 2018). The differences obtained may be under the influence of traditional gender roles and an upbringing that teaches young girls to be gentle and caring and boys to be strong and independent (Tejerina-Arreal et al., 2020; Kapungu et al., 2017). In our study, boys generally reported higher self-esteem than girls, and indicators of competence and confidence relate to the construct of self-esteem. These findings are also consistent with other research on a sample of Croatian adolescents, e.g., male adolescents report higher emotional self-efficacy (Reić Ercegovac et al., 2021) and higher levels of mental health, while female adolescents report higher levels of depression, anxiety, and stress (Maglica et al., 2021, Novak et al., 2021).

Parental Monitoring and Positive Youth Development

Adequate parental monitoring enables adolescents to feel loved, safe, and important to their parents. Youth disclosure and parental solicitation are dimensions of parental monitoring that imply open and honest conversation between the two. As such, they foster closeness and trust and help the adolescent thrive (Cadman et al., 2022; McNeely & Barber, 2010). When parents solicit information from their adolescents about where they are and what they are doing, and set rules and boundaries for appropriate adolescent behaviour, adolescents tend to show more positive developmental outcomes (Fletcher et al., 2004). Positive parenting, as measured by high levels of parental monitoring and maternal warmth, was also positively correlated with individual self-regulatory behaviours, which in turn positively influenced higher levels of PYD and even contribution to the community (Lewin-Bizan et al., 2010; Napolitano, 2011). It is therefore not surprising that both are positive predictors of all 5Cs. Kaniušonyte (2015) presented evidence that parental monitoring is strongly related to contribution – to self, family and community as PYD outcome. Parental knowledge proved to be an important predictor of caring and connection, and predicts more positive character. If a parent does not know what their child is doing, they have no way of teaching their child how to behave in different situations.

While parental control is a positive predictor of character and caring, it is also a negative predictor of competence, confidence, and connection. On the one hand, parental control involves setting boundaries and modeling not only appropriate behaviours but also caring. And because character refers to internalised norms, greater parental control is expected to promote character development. On the other hand, autonomy has been shown to be important for positive youth development (Aguirre-Davila et al., 2021), and parental control is antithetical to autonomy. This may be why parental control is a negative predictor of competence, confidence, and connection. It is also possible that parental control interacts with adolescent personality traits, for example, conscientiousness. If an adolescent is prone to self-criticism, he or she may perceive parental control as constant criticism and internalise it in ways that promote self-criticism. Perceived negative feedback can thus lead to lower self-esteem, but also to an emotional disconnection from the parents who are the source of that negative feedback.

School Climate and Positive Youth Development

School climate emerged as the strongest predictor of 5Cs, with regression coefficients ranging from .21 (Competence) to .46 (Connection). The results indicate that school climate is of great importance in promoting positive youth development, which once again confirms that school is an important environment for socio-emotional development and mental health promotion (Tomé et al. 2019). Adolescents' psychological well-being and development are thus significantly influenced by their experiences at school (Wigfield et al., 2006). Even though relationships with parents were found to be important for the positive development of Croatian youth, they are not decisive. Not all families have the same living conditions; they differ in family structure, socioeconomic status, environmental support, to name just a few differences. For this reason, not all children have the same opportunities to flourish. On the other hand, the school context can compensate for these differences and provide social justice and well-being for all young people.

Mediation Effect of School Climate

School climate proved to be a significant mediator in the relationship between youth disclosure and all 5Cs. This finding indicates that future studies should examine associations between parental monitoring, especially willingness to disclose information to parents, and relationships that adolescents establish within the school context. Somewhat related to our findings, there are other studies showing that parental support contributes directly to school connectedness but also has indirect effects on adolescents' school engagement as well as on their academic achievement (Bradley et al., 2021; Cheung et al., 2012). Chen et al. (2019) have found that family support is positively related to students' behavioural and emotional school engagement. Although schools are traditionally seen as environments where youth can learn and enhance academic skills, our findings suggest that there is a significant interaction of school and family context that has to be taken into account. If parents foster open relationships with their adolescents, combining it with boundaries, schools have a responsibility to ensure a positive and engaging culture that enables positive youth development. The link between these two could be assertiveness, which is developed by parents and encouraged by the school.

Conclusions

In the context of prevention science, our results indicate that intervention programs should build competence, confidence and connection in girls, and character and caring in boys. This study shows how important it is to invest in the school system and school climate, not only by improving material conditions, but also by improving students' sense of safety and belonging, and training teachers how to adapt to the needs of each child. The National Association of Social Workers (2021) defines social justice as equal economic, political, and social rights and opportunities for all. Although this study did not focus on social justice, the results indirectly confirm how important it could be that schools offer opportunities for participation and give youth a voice, since on a daily basis adolescents spend more time in schools than at home. By helping youth develop a positive social identity and learn how to value diversity, and by encouraging them to proactively seek justice (The Southern Poverty Law Center, 2018), we also promote their positive development. Our findings suggest that both parents and schools should be encouraged to increase their engagement in students' lives and their schooling. Interventions should emphasise personal initiative taking and teaching assertive communication skills, consistent with the social justice framework.

Limitations

Only first-year secondary school students participated in this study, which means that we cover only a small age range in adolescence. The fact that all participants attended public schools may affect generalizability in the global context; however, in the Croatian context, most adolescents are enrolled in public schools. Self-assessment questionnaires were used, which have certain shortcomings, namely a possibly limited ability to assess one's own thoughts, emotions, and behaviours, the giving of socially desirable answers, and the problem of reference points.

Another shortcoming of the study is its correlational design, which does not allow for causal conclusions since direction of relationships is not clear. To gain more valid insights into the results obtained, a longitudinal design of the study is needed and is in fact already taking place. It would also be interesting to compare how parental perceptions of monitoring and teachers' perceptions

of school climate predict positive adolescent development. Nevertheless, due to the sample size, findings seem to complement the existing corpus of literature.

Acknowledgements

This study is part of a broader project: *Testing the 5C Framework of Positive Youth Development: Traditional and Digital Mobile Assessment – P.R.O.T.E.C.T.* funded by the Croatian Science Foundation (UIP-2020-02-2852).

References

- Abela, J. R. Z., & Hankin, B. L. (2008). Cognitive vulnerability to depression in children and adolescents. A developmental psychopathology perspective. In J. R. Z. Abela, & B. L. Hankin (Eds.), *Handbook of depression in children and adolescents* (pp. 35–78). Guilford Press.
- Aguirre-Dávila, E., Morales-Castillo, M., & Moreno-Vásquez, M. (2021). Parenting, autonomy and academic achievement in adolescence. *Journal of Family Studies*, 1–14. <https://doi.org/10.1080/13229400.2021.1871935>
- Alm, S., Låftman, S. B., Sivertsson, F., & Bohman, H. (2020). Poor family relationships in adolescence as a risk factor of in-patient psychiatric care across the life course: A prospective cohort study. *Scandinavian Journal of Public Health*, 48(7), e140349482090291. <https://doi.org/10.1177/1403494820902914>
- American School Health Association. (2004). Wingspread declaration on school connections. *Journal of School Health*, 74(7), 233–234. <https://doi.org/10.1111/j.1746-1561.2004.tb08279.x>
- Bakhshae, F., Hejazi, E., Dortaj, F., & Farzad, V. (2016). Perceived parenting, school climate and positive youth development: A predicting model. *Journal of Fundamental and Applied Sciences*, 8(3), 654–667. <https://doi.org/10.4314/jfas.v8i3s.253>
- Benson, P. L., Scales, P. C., Hamilton, S. F., & Sesma, A. (2007). Positive youth development: theory, research, and applications. In R. M. Lerner, & W. Damon (Eds.), *Handbook of child psychology: Theoretical models of human development* (pp. 894–941). John Wiley & Sons Inc. <https://doi.org/10.1002/9780470147658.chpsy0116>
- Berk, L. E. (2018). *Development through the life span* (7th ed.). Pearson Education.
- Bradley, G. L., Ferguson, S., & Zimmer-Gembeck, M. J. (2021). Parental support, peer support and school connectedness as foundations for student engagement and academic achievement in Australian youth. In Dimitrova, R., Wiium, N. (Eds.), *Handbook of positive youth development. Springer Series on Child and Family Studies* (pp. 219–236). Springer. https://doi.org/10.1007/978-3-030-70262-5_15
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Bundick, M. J., & Tirri, K. (2014). Student perceptions of teacher support and competencies for fostering youth purpose and positive youth development: Perspectives from two countries. *Applied Developmental Science*, 18(3), 148–162. <https://doi.org/10.1080/10888691.2014.924357>
- Bundick, M. J., Yeager, D. S., King, P. E., & Damon, W. (2010). Thriving across the lifespan. In R. M. Lerner, M. E. Lamb, A. M. Freund, & W. F. Overton (Eds.), *Handbook of life-span development, Vol. 1: Cognition, Biology and Methods* (pp. 882–923). John Wiley & Sons.
- Cadman, T., Paul, E., Culpin, I., Sallis, H., Bould, H., & Pearson, R. (2022). Parental monitoring longitudinally associates with reduced risk of adolescent mental health problems. *Journal of Affective Disorders Reports*, 10, e100420. <https://doi.org/10.1016/j.jadr.2022.100420>
- Chen, B. B., Wiium, N., Dimitrova, R., & Chen, N. (2019). The relationships between family, school and community support and boundaries and student engagement

- among Chinese adolescents. *Current Psychology*, 38, 705–714. <https://doi.org/10.1007/s12144-017-9646-0>
- Cheung, C. S. S., Pomerantz, E. M., & Dong, W. (2013). Does adolescents' disclosure to their parents matter for their academic adjustment?. *Child Development*, 84(2), 693–710. <https://doi.org/10.1111/2Fj.1467-8624.2012.01853.x>
- de Kemp, R. A. T., Scholte, R. H. J., Overbeek, G., & Engels, R. C. M. E. (2006). Early adolescent delinquency. *Criminal Justice and Behavior*, 33(4), 488–510. <https://doi.org/10.1177/0093854806286208>
- Dimitrova, R., & Wiium, N. (2021). *Handbook of positive youth development: Advancing the next generation of research, policy and practice in global contexts*. Springer Nature Switzerland AG. https://doi.org/10.1007/978-3-030-70262-5_1
- Dorius, C. J., Bahr, S. J., Hoffmann, J. P., & Harmon, E. L. (2004). Parenting practices as moderators of the relationship between peers and adolescent marijuana use. *Journal of Marriage and Family*, 66(1), 163–178. <https://doi.org/10.1111/j.0022-2445.2004.00012.x>
- Dutra-Thomé, L., & Ponciano, E. L. T. (2021). The relationship between emerging adults and their parents as a PYD promotive factor in Brazil. In R. Dimitrova, & N. Wiium (Eds.), *Handbook of positive youth development. Springer Series on Child and Family Studies* (pp. 123–134). Springer Nature Switzerland AG. https://doi.org/10.1007/978-3-030-70262-5_9
- Eisenberg, N., & Lennon, R. (1983). Sex differences in empathy and related capacities. *Psychological Bulletin*, 94(1), 100–131. <https://doi.org/10.1037/0033-2909.94.1.100>
- Fletcher, A. C., Steinberg, L., & Williams-Wheeler, M. (2004). Parental influences on adolescent problem behaviour: Revisiting Stattin and Kerr. *Child Development*, 75(3), 781–796. <https://doi.org/10.1111/j.1467-8624.2004.00706.x>
- Galasso, V., Pons, V., Profeta, P., Becher, M., Brouard, S., & Foucault, M. (2020). Gender differences in COVID-19 attitudes and behavior: Panel evidence from eight countries. *Proceedings of the National Academy of Sciences of the United States of America*, 117, 27285–27291. <https://doi.org/10.1073/pnas.2012520117>
- Geldhof, G. J., Bowers, E. P., Boyd, M. J., Mueller, M. K., Napolitano, C. M., Schmid, K. L., Lerner, J. V., & Lerner, R. M. (2014). Creation of short and very short measures of the five Cs of positive youth development. *Journal of Research on Adolescence*, 24(1), 163–176. <https://doi.org/10.1111/jora.12039>
- Goldberg, J. M., Sklad, M., Elfrink, T. R., Schreurs, K. M. G., Bohlmeijer, E. T., & Clarke, A.M. (2019). Effectiveness of interventions adopting a whole school approach to enhancing social and emotional development: A metaanalysis. *European Journal of Psychology of Education*, 34(4), 755–782. <https://doi.org/10.1007/s10212-018-0406-9>
- Gomez, B. J., & Ang, P. M. M. (2007). Promoting positive youth development in schools. *Theory Into Practice*, 46(2), 97–104. <https://doi.org/10.1080/00405840701232752>
- Gomez-Baya, D., Babić Čikeš, A., Hirnstein, M., Kurtović, A., Vrdoljak, G., Wiium, N. (2022). Positive youth development and depression: An examination of gender differences in Croatia and Spain.. *Frontiers in Psychology*, 21(12), e6282. <https://doi.org/10.3389/fpsyg.2021.689354>
- Hamza, C. A., & Willoughby, T. (2010). Perceived parental monitoring, adolescent disclosure, and adolescent depressive symptoms: A longitudinal examination. *Journal of Youth and Adolescence*, 40(7), 902–915. <https://doi.org/10.1007/s10964-010-9604-8>

- Hawk, S. T., Hale, W. W., Raaijmakers, Q. A. W., & Meeus, W. (2008). Adolescents' perceptions of privacy invasion in reaction to parental solicitation and control. *The Journal of Early Adolescence*, 28(4), 583–608. <https://doi.org/10.1177/0272431608317611>
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. The Guilford Press.
- Hessel, H., He, Y., & Dworkin, J. (2016). Paternal monitoring: The relationship between online and in-person solicitation and youth outcomes. *Journal of Youth and Adolescence*, 46(2), 288–299. <https://doi.org/10.1007/s10964-016-0490-6>
- Kaniušonyte, G. (2015). The effects of parental monitoring on adolescent and emerging adult contribution: A longitudinal examination. *International Journal of Psychological Studies*, 7, 9–16. <https://doi.org/10.5539/ijps.v7n1p9>
- Kapetanovic, S., & Boson, K. (2020). Discrepancies in parents' and adolescents' reports on parent-adolescent communication and associations to adolescents' psychological health. *Current Psychology*, 41(7), 4259–4270. <https://doi.org/10.1007/s12144-020-00911-0>
- Kapetanovic, S., Rothenberg, W. A., Lansford, J. E., Bornstein, M. H., Chang, L., Deater-Deckard, K., Di Giunta, L., Dodge, K. A., Gurdal, S., Malone, P. S., Oburu, P., Pastorelli, C., Skinner, A. T., Sorbring, E., Steinberg, L., Tapanya, S., Uribe Tirado, L. M., Yotanyamaneewong, S., Peña Alampay, L., & Al-Hassan, S. M. (2020). Cross-cultural examination of links between parents-adolescent communication and adolescent psychological problems in 12 cultural groups. *Journal of Youth and Adolescence*, 49(6), 1225–1244. <https://doi.org/10.1007/s10964-020-01212-2>
- Kapungu, C., Petroni, S., Allen, N. B., Brumana, L., Collins, P. Y., De Silva, M., Dua, T., Haj-Ahmad, J., Leichner, A., Patton, G., Pringle, B., Omigbodun, O., Silver, K. L., Estrin, G. L., Singh, S., Zaka, N., & Zeck, W. (2018). Gendered influences on adolescent mental health in low-income and middle-income countries: Recommendations from an expert convening. *The Lancet Child & Adolescent Health*, 2(2), 85–86. [https://doi.org/10.1016/S2352-4642\(17\)30152-9](https://doi.org/10.1016/S2352-4642(17)30152-9)
- Kidger, J., Araya, R., Donovan, J., & Gunnell, D. (2012). The effect of the school environment on the emotional health of adolescents: A systematic review. *Pediatrics*, 129(5), 925–949. <https://doi.org/10.1542/peds.2011-2248>
- Kline, R. B. (1998). *Principles and practice of structural equation modelling*. Guilford Press.
- León-del-Barco, B., Mendo-Lázaro, S., Polo-del-Río, M., & López-Ramos, V. (2019). Parental psychological control and emotional and behavioral disorders among Spanish adolescents. *International Journal of Environmental Research and Public Health*, 16(3), 507. <https://doi.org/10.3390/ijerph16030507>
- Lerner, R. M. (2005). Positive youth development a view of the issues. *The Journal of Early Adolescence*, 25(1), 10–16. <https://doi.org/10.1177/0272431604273211>
- Lerner, R. M., Lerner, J. V., Murry, V. M., Smith, E. P., Bowers, E. P., Geldhof, G. J., & Buckingham, M. H. (2021). Positive youth development in 2020: Theory, research, programs, and the promotion of social justice. *Journal of Research on Adolescence*, 31(4), 1114–1134. <https://doi.org/10.1111/jora.12609>
- Lewin-Bizan, S., Bowers, E. P., & Lerner, R. M. (2010). One good thing leads to another. Cascades of positive youth development among American children and adolescents. *Development and psychopathology*, 22(4), 43–48. <https://doi.org/10.1017/S0954579410000441>
- Maglica, T., Novak, M., Mihić, J., & Roviš D. (2021, September 29 – October 1). *Positive Youth Development in Croatian Context-Validation of 5C Short Measure of PYD*

- [Conference session]. Prevention in a covid recovery society- Challenges of planning and implementing prevention approaches in the new normality/European Society for Prevention Research – EUSPR, Online. https://euspr2021.exordo.com/files/mesages/528/EUSPR_2021_Program.pdf
- Maglica, T., Reić Ercegovac, I., & Ljubetić, M. (2021). Family characteristics as determinants of mental health in adolescents. *European Journal of Mental Health*, 16(2), 7–30. <https://doi.org/10.5708/ejmh.16.2021.2.1>
- Marsh, H. W., Walker, R., & Debus, R. (1991). Subject-specific components of academic self-concept and self-efficacy. *Contemporary Educational Psychology*, 16, 331–345. [https://doi.org/10.1016/0361-476X\(91\)90013-B](https://doi.org/10.1016/0361-476X(91)90013-B)
- McCrae, R. R., Costa, P. T., Terracciano, A., Parker, W. D., Mills, C. J., De Fruyt, F., & Merielde, I. (2002). Personality trait development from age 12 to age 18: Longitudinal, cross-sectional and cross-cultural analyses. *Journal of Personality and Social Psychology*, 83(6), 1456–1468. <https://doi.org/10.1037/0022-3514.83.6.1456>
- McNeely, C. A., & Barber, B. K. (2010). How do parents make adolescents feel loved? Perspectives on supportive parenting from adolescents in 12 cultures. *Journal of Adolescent Research*, 25(4), 601–631. <https://doi.org/10.1177/0743558409357235>
- Mohamed, N. H., Hamzah, S. R., & Samah, I. A. I. B. A. (2017). Parental and peer attachment and its relationship with positive youth development. *International Journal of Academic Research in Business and Social Sciences*, 7(9), 352–362. <https://doi.org/10.6007/ijarbss/v7-i9/3331>
- Napolitano, C. M., Bowers, E. P., Gestsdóttir, S., Depping, M., Von, E. A., Chase, P., & Lerner, J. V. (2011). The role of parenting and goal selection in positive youth development: A person-centered approach. *Journal of Adolescence*, 34(6), 1137–1149. <https://doi.org/10.1016/j.adolescence.2011.07.008>
- National School Climate Council (2007). The School Climate Challenge: Narrowing the gap between school climate research and school climate policy, practice guidelines and teacher education policy. Retrieved January 30, 2022 from <http://www.schoolclimate.org/climate/documents/policy/school-climate-challenge-web.pdf>
- Novak, M., Parr, N. J., Ferić, M., Mihić, J., & Kranželić, V. (2021). Positive youth development in Croatia: School and family factors associated with mental health of Croatian adolescents. *Frontiers in Psychology*, 11, e611169. <https://doi.org/10.3389/fpsyg.2020.611169>
- O'Connor, M., Sanson, A., Hawkins, M. T., Letcher, P., Toumbourou, J. W., Smart, D., Vassallo, S., & Olsson, C. A. (2010). Predictors of positive development in emerging adulthood. *Journal of Youth and Adolescence*, 40(7), 860–874. <https://doi.org/10.1007/s10964-010-9593-7>
- Reić Ercegovac, I., Maglica, T., & Ljubetić, M. (2021). The relationship between self-esteem, self-efficacy, family and life satisfaction, loneliness and academic achievement during adolescence/Odnos između samopoštovanja, samoučinkovitosti, zadovoljstva s obitelji i životom, usamljenosti i akademskoga postignuća tijekom adolescencije. *Croatian Journal of Education – Hrvatski Časopis Za Odgoj I Obrazovanje*, 23(1), 65–83. <https://doi.org/10.15516/cje.v23i0.4049>
- Rueger, S. Y., Malecki, C. K., & Demaray, M. K. (2008). Gender differences in the relationship between perceived social support and student adjustment during early adolescence. *School Psychology Quarterly*, 23(4), 496–514. <https://doi.org/10.1037/1045-3830.23.4.496>

- Ryan, J., Roman, N. V., & Okwany, A. (2015). The effects of parental monitoring and communication on adolescent substance use and risky sexual activity: A systematic review. *The Open Family Studies Journal*, 7(1). <https://doi.org/10.2174/1874922401507010012>
- Stattin, H., & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development*, 71(4), 1072–1085. <https://doi.org/10.1111/1467-8624.00210>
- Tejerina-Arreal, M., Parker, C., Paget, A., Henley, W., Logan, S., Emond, A., & Ford T. (2020). Child and adolescent mental health trajectories in relation to exclusion from school from the Avon Longitudinal Study parents and children. *Child and Adolescent Mental Health*, 25(4), 217–223. <https://doi.org/10.1111/camh.12367>
- Tharp, A. T., & Noonan, R. K. (2012). Associations between three characteristics of parent–youth relationships, youth substance use, and dating attitudes. *Health Promotion Practice*, 13(4), 515–523. <https://doi.org/10.1177/1524839910386220>
- The National Association of Social Workers (2021). *Code of Ethics of the National Association of Social Workers*. Retrieved January 30, 2023 from <https://www.socialworkers.org/About/Ethics/Code-of-Ethics/Code-of-Ethics-English>
- The Southern Poverty Law Center (2018). *Social Justice Standards: The Teaching Tolerance Anti-Bias Framework*. Retrieved January 30, 2022 from <https://www.learningforjustice.org/sites/default/files/2020-09/TT-Social-Justice-Standards-Anti-bias-framework-2020.pdf>
- Tomé, G., Gaspar de Matos, M., Camacho, I., Gomes, P., Reis, M., & Branquinho, C. (2018). Mental health promotion in school context – Validation of the ES'COOL scale for teachers. *Journal of Psychiatry and Behavioral Sciences*, 1(2), e1009. <https://doi.org/10.33582/2637-8027/1009>
- Tomé, G., Gaspar de Matos, M., Reis, M., Ramiro, L., Coelho, F., Gómez-Baya, D., & Wiium, N. (2020). Positive youth development: The 5 C's effect in a school environment. *EREBEA. Revista de Humanidades Y Ciencias Sociales*, 10. <https://doi.org/10.33776/erebea.v10i0.4958>
- Velki, T., Kuterovac Jagodić, G., & Antunović, A. (2014). Razvoj i validacija hrvatskog upitnika školske klime za učenike. *Suvremena Psihologija*, 17(2), 151–165.
- Vélez, C. E., Braver, S. L., Cookston, J. T., Fabricius, W. V., & Parke, R. D. (2019). Does mattering to parents matter to adolescent mental health?: A psychometric analysis. *Family Relations*, 69(1), 180–194. <https://doi.org/10.1111/fare.12396>
- Vrdoljak, G., Kurtović, A., Babić Čikeš, A., & Hirnstein, M. (2023). Gender and educational stage moderate the effects of developmental assets on risk behaviours in youth. *International Journal of Adolescence and Youth*, 28(1), 1–19. <https://doi.org/10.1080/02673843.2023.2183872>
- Wigfield, A., Eccles, J. S., Schiefele, U., Roeser, R. W., & Davis-Kean, P. (2006). Development of achievement motivation. In: N. Eisenberg, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology: Social, emotional, and personality development* (pp. 933–1002). John Wiley & Sons, Inc.
- Yu, L., & Shek, D. T. L. (2021a). Positive youth development attributes and parenting as protective factors against adolescent social networking addiction in Hong Kong. *Frontiers in Pediatrics*, 9, e649232. <https://doi.org/10.3389/fped.2021.649232>
- Yu, L., & Shek, D. T. L. (2021b). Positive youth development attributes and parenting as protective factors against adolescent social networking addiction in Hong Kong. *Frontiers in Pediatrics*, 9. <https://doi.org/10.3389/fped.2021.649232>