

ORIGINAL SCIENTIFIC PAPER

Family Social Capital as a Predictor of Adolescent Health during the COVID-19 Pandemic

Franjo Rozijan¹, Filip Sinković², Dario Novak²

¹Secondary school Krapina, Krapina, Croatia, ²University of Zagreb, Faculty of Kinesiology, Zagreb, Croatia

Abstract

During the COVID-19 pandemic, family social capital may have played a key role in maintaining adolescent health, as they faced challenges such as social isolation and disruptions to their regular activities. Accordingly, the primary aim of this study was to examine the association between family social capital and adolescents' subjective health assessment during the COVID-19 pandemic. The study included 317 final-year high school students from the four largest cities in Croatia (Zagreb, Split, Rijeka, Osijek). The participants were aged between 17 and 20 years (18.24 ± 0.58). Data were collected through survey questionnaires titled Social Capital and Adolescents' Subjective Well-Being During the COVID-19 Pandemic, which included demographic information, assessments of family social capital, and subjective health. Descriptive statistics, the Mann-Whitney U test, the Kruskal-Wallis test, and logistic regression analysis were used to analyze the data. The results of the study indicate that parental support and understanding, as well as quality family time, are key elements in maintaining and improving adolescents' subjective health assessments. These findings emphasize the importance of family social capital in preserving the health of young people during crisis situations. Moreover, these insights have significant implications for the design of interventions and programs aimed at strengthening family bonds and support as a means of improving youth health.

Keywords: social capital, family, subjective health assessment, adolescents, COVID-19

Introduction

Social capital represents resources available through social networks and relationships, and it is important for various aspects of human life, including health (Bourdieu, 1983; Coleman, 1990). The theoretical framework of social capital emphasizes interpersonal relationships, trust, and norms of reciprocity as key components of social capital (Putnam, 2000). Within the family, social capital can be particularly significant, as family support, shared activities, and emotional connectedness contribute to better physical and mental health of family members (Furuta et al., 2012).

The COVID-19 pandemic caused numerous changes in daily life, including restrictions on social interactions and physical activities, which may have impacted the well-being of young people (Breux et al., 2023; Lulić Drenjak et al., 2023). In fact, it has been suggested that adolescents are more affected than adults by the social impact of the pandemic, and one of

the most frequently endorsed challenges by parents during the pandemic includes the lack of social interaction for their adolescents (Roy et al., 2022; Unni, 2020). Accordingly, during the COVID-19 pandemic, family social capital may have played a key role in maintaining the health of adolescents, who faced challenges such as social isolation and disruptions to their usual activities (Bai, Jin, & Wan, 2020). Family social capital not only influences adolescent health but also affects their educational outcomes, social skills, and overall sense of well-being (Fraser & Aldrich, 2021; Novak et al., 2016). Parents and close family members serve as primary sources of support, providing emotional security and stability during a developmental period when adolescents are particularly sensitive to external stressors (Fraser & Aldrich, 2021). Understanding the role of family social capital in preserving adolescent health can help in shaping targeted public health measures and support programs (Novak, Doubova, & Kawachi, 2016; Novak, Suzuki, &



Correspondence:

D. Novak
University of Zagreb, Faculty of Kinesiology, Horvačanski zavoj 15, 10000, Zagreb, Croatia
E-mail: dario.novak@kif.unizg.hr

Kawachi, 2015). In line with that, some previous research has established that the COVID-19 pandemic resulted in adolescents spending significantly more time with family members, and the findings indicated a significant improvement in the quality of family relationships and play between siblings, particularly for older adolescents (Campione-Barr, Rote, Killoren, & Rose, 2021; Gadassi Polack et al., 2021).

However, spending significantly more time with family members can provide both benefits and concerns. Therefore, the main research problem was to examine how different aspects of family social capital influence adolescents' subjective health assessment during the COVID-19 pandemic. Specifically, the study focused on understanding the role of family support in maintaining and improving adolescent health in conditions of heightened stress and social isolation caused by the COVID-19 pandemic. The aim was to determine the extent to which family social capital can act as a protective factor against the negative impacts of the COVID-19 pandemic on adolescent health. In line with the stated aim, the hypothesis was that adolescents with higher levels of perceived family support would have a better subjective health assessment, and that shared family activities would be positively associated with better subjective health assessments among adolescents.

Methods

Participants

The sample included 317 adolescents (M=212; F=105) who attended the final year of secondary school from the four largest cities in the Republic of Croatia: Zagreb (n=82), Split (n=80), Rijeka (n=65), and Osijek (n=90). Participants were aged between 17 and 20 years (18.24±0.58). The research was conducted in accordance with the Declaration of Helsinki and was approved by the Ethics Committee of the Faculty of Kinesiology, University of Zagreb (number: 33./2021). All participants were informed about the protocol and purpose of the research prior to its commencement and provided written consent to participate. The complete testing protocol was explained to them in detail, with special emphasis on the fact that the research did not require any additional physical effort beyond their regular activities.

Measurements Instruments

Data were collected using a questionnaire titled "Social Capital and Adolescents' Subjective Well-Being During the COVID-19 Pandemic", which was carefully designed to cover all relevant aspects of the research. In the first part of the questionnaire, participants provided demographic informa-

tion, subjective health assessments, and the educational level of both parents. The measure of subjective health assessment has been frequently used in previous studies on social capital and health, demonstrating good reliability and validity (Hu, Yang, & Luo, 2017; Jiang & Kang, 2019). The second part of the questionnaire assessed family social capital using a social capital questionnaire that also has satisfactory metric characteristics (Carrillo-Álvarez, Villalonga-Olives, Riera-Romani, & Kawachi, 2019; Novak et al., 2016; Novak et al., 2015).

Variables and Protocol

Before beginning the questionnaire, each participant was given a detailed explanation of the instructions and the completion process, with the opportunity to ask questions if anything was unclear. For the collection of demographic data about the study participants, the following variables were used: age, gender, parents' educational level, the city from which the participants come, and the educational program of secondary school. Participants rated their own health on a Likert scale from 1 (poor health) to 5 (excellent health). The family social capital questionnaire (FSC) consisted of six questions designed to assess family social capital. Responses to the questions in the family social capital segment evaluated the frequency of certain actions addressed by the questions.

Statistical Analysis

The obtained data were processed in the program Statistica 14.0.1.25 (TIBCO Software, Inc.) for the Windows operating system and in Microsoft Excel 2016 (Palo Alto, CA, USA). Basic descriptive parameters (mean and standard deviation) were used to describe each variable. The normality of the distribution was tested with the Kolmogorov-Smirnov test. The relationship between the variable "self-assessed health" and the set of family social capital variables (FSC-1-6) was examined using a sigmoid function in logistic regression analysis. In this analysis, the values of the Omnibus test, Hosmer-Lemeshow test, Cox and Snell R^2 , and Nagelkerke R^2 were calculated. The level of statistical significance was set at $p < 0.05$.

Results

Table 1 shows the basic statistical parameters for the set of social capital variables. Table 2 presents the coefficients from the logistic regression analysis, while Table 3 displays the coefficients for all three sigmoid functions of the regression equation. The results indicate that family support is significantly positively associated with better subjective health assessments among adolescents.

Table 1. Basic Descriptive Parameters of the Variables for Social Capital

Variables	\bar{x}	SD
FSC-1 (Do your parents provide you with support and understanding during your secondary education?)	4.50	0.78
FSC-2 (Do you spend your free time hanging out with your family members?)	3.63	0.95
FSC-3 (Does your family help you with your schoolwork?)	2.60	1.29
FSC-4 (Do you participate in household chores, e.g. washing dishes, vacuuming?)	3.71	1.12
FSC-5 (Do you talk to your parents about what happened during the day at school?)	3.67	1.08
FSC-6 (Are you informed when something important happens in your extended family, e.g. birth, wedding, death?)	4.63	0.74

Note. \bar{x} - mean; SD - standard deviation; FSC - family social capital

Table 2. Coefficients of Logistic Regression Analysis

Variables	Omnibus test of model coefficients (df = 6)	Hosmer and Lemeshow test (df = 8)	Pseudo R2 (Cox and Snell test)	Pseudo R2 (Nagelkerke test)
HE – FSC-1-6	p = 0.00*	p = 0.80	R2 = 0.08	R2 = 0.12

Note. HE – health; FSC – family social capital; df - degrees of freedom; p - significance of the variable; * — statistically significant; R2 - proportion of explained variance.

Table 3. Coefficients of Sigmoid Functions of the Regression Equation

Variables	B	SE	p
FSC-1 (Do your parents provide you with support and understanding during your secondary education?)	0.44	0.20	0.02*
FSC-2 (Do you spend your free time hanging out with your family members?)	0.45	0.19	0.02*
FSC-3 (Does your family help you with your schoolwork?)	-0.10	0.13	0.44
FSC-4 (Do you participate in household chores, e.g. washing dishes, vacuuming?)	-0.08	0.14	0.56
FSC-5 (Do you talk to your parents about what happened during the day at school?)	-0.23	0.16	0.15
FSC-6 (Are you informed when something important happens in your extended family, e.g. birth, wedding, death?)	0.27	0.19	0.15

Note. FSC – family social capital; B – coefficient; SE – standard error; p - significance of the variable; * — statistically significant

Discussion and Conclusion

The analysis of the research results indicates that parental support and understanding, along with quality family time, are key elements in maintaining and improving adolescents' subjective health assessments. Parental support during the COVID-19 pandemic provided emotional stability and a sense of security, which positively impacted the overall health of young people during a time of significant stress and uncertainty. At the same time, shared family activities during this crisis period strengthened family bonds and provided a sense of belonging, which further contributed to a better perception of health. In line with this, it can be concluded that the results of this study clearly point to the important role of social capital within the family, particularly in the context of parental support and shared family activities, in adolescents' subjective health assessments. This also confirms the hypotheses that adolescents with a higher level of perceived parental support will have a better subjective health assessment and that shared family activities will also be positively associated with better subjective health assessments among adolescents.

Also, these results support the findings of previous research, which have shown that family support and healthy family relationships play a crucial role in the psychological and physical health of adolescents (Tuominen & Haanpää, 2022; Zhu, Zhuang & Ip, 2021). Additionally, research confirms that crisis situations such as the COVID-19 pandemic can further highlight the importance of strong family bonds in maintaining the health of children and young people (Bian, 2020; Novak et al., 2018; Zoellner & Maercker, 2006). The re-

sults also reinforced existing knowledge by emphasizing that family social capital could play a key role in maintaining the health of adolescents, who faced challenges such as social isolation and the disruption of regular activities (Bai et al., 2020; Fraser & Aldrich, 2021).

In conclusion, this study highlights the crucial role that family social capital plays in adolescents' subjective health assessments. These findings have significant implications for the design of interventions and programs aimed at strengthening family bonds and support to improve youth health. However, this study has certain limitations. First, the sample is restricted to a specific geographic location, which may limit the generalizability of the findings to broader populations. Second, the use of questionnaire surveys may introduce socially desirable response bias, potentially affecting the accuracy of the results. Despite these limitations, the findings provide valuable insights into the role of social capital, not only within families but also in schools, in promoting physical activity and overall well-being. Future research should prioritize longitudinal studies to track changes in social capital and physical activity over time. Furthermore, incorporating qualitative methods would offer a deeper understanding of the nuanced relationship between social capital and adolescent health. Exploring interventions aimed at enhancing social capital within diverse school and family environments could yield practical strategies for improving adolescents' physical activity levels, with broader implications for educational, social, and public health policies. These strategies could be especially relevant in post-crisis settings, where rebuilding social networks is essential for youth development.

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Conflict of Interest

The authors report no conflict of interest.

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