

# Correlation Between Different Domains of Social Capital and Psychological Distress Among Chinese High School Students

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## ABSTRACT

*Social capital has been shown to have positive effects on multiple health outcomes among young people. Studies suggest that social capital is an important predictor of health and wellbeing of children and adolescents, including their mental health. This research examined the correlation between different domains of social capital – in the family, in the neighbourhood, and at school – and the level of psychological distress among high school students in China. A cross-sectional survey among 501 high school students (217 males and 284 females), aged 15–19 years old, was carried out in the 2020–2021 school year. Logistic regression was used to examine the association of family, neighbourhood, and school social capital with the risk of high psychological distress, measured by the Kessler–6 scale. The findings in this study suggest that young people with a higher level of family support, higher level of neighbourhood trust and higher level of teacher-student interpersonal trust are less likely to report high psychological distress. Social connectedness within the family, neighbourhood and school thus appear to be important factors influencing mood among young people.*

**Key words:** social capital, psychological distress, Chinese high school students

## Introduction

Mental health among adolescents is considered a public health issue, as approximately one in five adolescents experience mental health problems globally. The World Health Organization defines mental health as a state of wellbeing and functioning in which an individual achieves his or her potential, is resilient to life stress and can positively contribute to society. The World Health Organization reports that mental health issues are particularly acute between the ages of 10 and 20. Mental health issues are causing a lot of social and economic pressure on society and individuals, especially in developing countries<sup>1</sup>. A growing number of researchers have found that social capital factors are associated with various diseases, including mental health illness<sup>2</sup>. With economic development and urbanization, mental disorders and psychological disorders have become key risk factors for triggering non-communicable diseases and major components of the global disease burden. Data from the China Mental Health Survey showed that the lifetime prevalence rate of mental disorders in China was 16.6%<sup>3</sup>. Psychological problems of

Chinese high school students include low emotional health, low self-evaluation, low sense of stress and low interpersonal support. At the same time, it was found that the self-evaluation of high school girls was generally lower than that of boys. During adolescence, family, school, peers, and the community are the primary environments in which adolescents grow up, and adolescents' social capital is embedded in their daily learning and living environments<sup>4</sup>.

The issue of adolescent mental health has been an important area of great concern at the academic and social level. Adolescence is the period of transition from childhood to adulthood during which adolescents become physiologically mature and their development accelerates, after which they become psychologically and economically independent adults<sup>5</sup>.

A study was conducted that analysed the association between social capital indicators and psychological distress in Catalan adolescents. Results of the study suggest

that higher levels of determined family support and teacher-student trust reduce the likelihood of psychological distress in adolescents from Barcelona (Spain). Higher determined neighbourhood informal control was associated with mental health<sup>6</sup>. Other study linked social capital and diet among Lithuanian young adults while mediating the role of psychological distress<sup>7</sup>. Results suggest that certain social capital domains and lower psychological distress can predict higher adherence to the Mediterranean diet. Johnson-Singh et. al. investigated the role of social capital in psychological distress with regards to ethnic heterogeneity. Authors conclude that socioeconomic status and some elements of social capital are important explanatory factors<sup>8</sup>.

Social capital is inversely associated with psychological distress, and partly indirect through subjective social status. Social capital acts as an intervening mechanism between different social factors and psychological distress<sup>9</sup>. It was found that social capital significantly affects sleep quality and psychological distress among Chinese adults. Authors suggest that attention should be paid to mental health and sleep quality through primary health and strengthening social resources<sup>10</sup>. Among Croatian high school students' high social capital is associated with regular moderate to vigorous physical activity in boys and regular overall physical activity in girls<sup>11</sup>.

Coleman<sup>12</sup> states that social capital is a resource which exists in family relationships and various organizations of society. Such resources are crucial to the psychological and social development of children or young people. In addition to individual factors, social capital plays an important role in the mental health of individuals. The quality and quantity of social capital possessed by individuals and their social capital investments reflect their ability to obtain additional supporting resources, such as material, emotional, and spiritual support from external social networks<sup>5</sup>. According to some researchers, high-income families invest significantly more in family social capital than low-income families. Low-income families spend a lot of time at work to meet the urgent needs of the family, thus reducing the time spent supervising their children. Spending a lot of energy and time at work does not allow low-income families to optimally support their children and establish a good parent-child relationship<sup>6</sup>. Social capital is represented in formal and informal norms formed by the group in the process of interaction. People with higher status in the group can easily gain support and respect from the group and enjoy corresponding high-quality resources. Therefore, the influence of social capital on the mental health of individuals is self-evident.

Researchers studied the relationship between family social capital, school social capital, and peer social capital on adolescent mental health using data from the China Education Panel Survey (CEPS) and the China Family Panel Studies (CFPS). They found that adolescents' social capital has a positive impact on the development of mental health. Specifically, family social capital,

school social capital, peer social capital, and community social capital all have positive effects on adolescent mental health, and they have different influence mechanisms due to the role of adolescents' characteristic factors such as gender, academic achievement, and family socioeconomic status<sup>13</sup>.

The main goal of this research was to explore the impact of different aspects of social capital, including family social capital, school social capital and community social capital on psychological distress of high school students in Beijing, the capital of China.

## Materials and Methods

Survey was administered in China high schools where students responded to the survey which was given during class. All participants signed a consent form, all procedures were done in accordance with the ethical standards of the Helsinki declaration. The students filled out two questionnaires, one for assessment of social capital and the other for psychological stress assessment. The measuring instrument used for psychological stress assessment was the Kessler–6 scale. Studies show that K6 is a reliable measuring instrument for the assessment of mood and anxiety in adolescents. The questionnaire consists of six questions and the participants need to state how often the described state happens (0– never, 4– all the time)<sup>14,15</sup>. Individual perception of social capital in the domains of family, neighbourhood and high school was determined with 5 questions covering informal social control, vertical school trust and reciprocity at school<sup>11,16,17,18</sup>. The participants reported their responses on a Likert scale from 1 (strongly disagree) up to 5 (strongly agree)<sup>19,20,21</sup>. The questionnaires were distributed randomly, and the proportion of each grade varies.

A cross-sectional survey was carried out in the 2020–2021 school year among high school students from Beijing. The total number of participants in the study was 501 students, among which 217 were male and 284 were female. The participants were between 15 and 19 years old (Mean= 16.6±1.0). All parents signed an informed consent, and the research was approved by the Institutional Review Board of the Beijing Sport University.

## Statistics

Descriptive statistics were used to show the data distribution of the analysed variables. Skewness and kurtosis criteria was used to determine normality of data distribution. The range determined was between –1 and 1 so the scale variables were considered normally distributed. Logistic regression was used to examine the influence of family, neighbourhood, and school social capital on the risk of high psychological distress, measured by the Kessler–6 scale. All data was analysed using statistical software SPSS (SPSS Inc., Chicago, IL, USA).

## Results

The groups were divided into high- and low-level psychological distress groups and compared based on their family social capital, neighbourhood trust, informal social control, vertical trust, and reciprocity. Statistically significant differences were determined with the  $\chi^2$  test between the groups of high and low psychological distress in social capital domains of family social capital, neighbourhood trust, informal social control, vertical trust, and reciprocity, as shown in Table 1. The differences were determined by analysing all participants, both males and females. Data distribution is also represented for boys and girls separately.

The distribution of social capital was also represented in Table 2. The participants reported high levels of social capital in domains of family social capital (boys=85.7%; girls=84.5%), neighbourhood trust (boys=78.8%;

girls=72.2%), vertical trust (boys=81.6%, girls=81.7) and reciprocity (boys=81.1%; girls=86.6%). Low social capital was reported in informal social control (boys=29.5%; girls=22.9%).

There is no statistically significant difference between the groups of students with low or high psychological distress based on their gender, body mass index and self-rated health, as shown in Table 3. There is no statistically significant relationship between psychological distress and age or parental occupation, as shown in Table 4.

## Discussion

High school is a critical life period in the development of adolescents. This is a period of high incidence of multiple psychological issues. Development and changes in

**TABLE 1**

THE DISTRIBUTION OF HIGH SOCIAL CAPITAL BETWEEN HIGH AND LOW PSYCHOLOGICAL DISTRESS ( $\chi^2$  TEST)

High Social Capital	Total		Psychological Distress		Girls	
	High	Low	High	Low	High	Low
N (%)						
Family Social Capital	168 (80.0)	258 (88.7)**	70 (78.7)	116 (90.6)*	98 (81.0)	142 (87.1)
Neighbourhood Trust	144 (68.6)	232 (79.7)**	67 (75.3)	104 (81.3)	77 (63.6)	128 (78.5)**
Informal Social Control	244 (21.0)	85 (29.2)*	21 (23.6)	43 (33.6)	23 (19.0)	42 (25.8)
Vertical Trust	158 (75.2)	251 (86.3)**	67 (75.3)	110 (85.9)*	91 (75.2)	8141 (6.5)*
Reciprocity	172 (81.9)	263 (90.4)**	72 (80.9)	117 (91.4)	100 (82.6)	146 (89.6)

Note: \*– p<.05; \*\*– p<.01

**TABLE 2**

THE DISTRIBUTION OF HIGH SOCIAL CAPITAL BETWEEN BOYS AND GIRLS ( $\chi^2$  TEST)

Gender	High Social Capital				
	Family Social Capital	Neighbourhood Trust	Informal Social Control	Vertical Trust	Reciprocity
N (%)					
Boys	186 (85.7)	171 (78.8)	64 (29.5)	177 (81.6)	189 (81.1)
Girls	240 (84.5)	205 (72.2)	65 (22.9)	232 (81.7)	246 (86.6)

**TABLE 3**

THE DISTRIBUTION OF COVARIATES BETWEEN HIGH AND LOW PSYCHOLOGICAL DISTRESS ( $\chi^2$  TEST)

	Covariates					
	Gender		BMI		SRH	
	Boys	Girls	Not Overweight	Overweight	Bad	Good
N (%)						
High	89 (41.0)	121 (42.6)	171 (81.4)	39 (18.6)	72 (34.3)	138 (65.7)
Low	128 (59.0)	163 (57.4)	236 (81.1)	55 (18.9)	99 (34.0)	192 (66.0)

Note: BMI – body mass index; SRH – self-rated health

**TABLE 4**  
THE CORRELATION BETWEEN PSYCHOLOGICAL DISTRESS AND COVARIATES

	Age	Parent's occupation (father)	Parent's occupation (mother)
	Pearson's r		
Psychological Distress	.02	.01	.02

physiology and psychology in adolescence continue to affect high school students. The period of accelerated growth and development during adolescence is a time when learned patterns of behaviour can positively or negatively impact mental health<sup>22</sup>. Even small psychological symptoms in young people encourage inactivity, making them ineffective and dissatisfied. The high school period is a time when mental health becomes one of main components of social health<sup>23</sup>. Determining psychological symptoms in individuals is important for mental disease prevention. Psychological problems occur during periods when individuals have different life difficulties and problems<sup>24</sup>. Family social capital, school social capital, community social capital and peer social capital have positive effects on adolescents' mental health. That is, the higher the socioeconomic status of the adolescent's family, the stronger the contribution of the adolescent's social capital to mental health<sup>25</sup>.

Study findings suggest that young people with higher level of family support, higher level of neighbourhood trust, and higher level of teacher-student interpersonal trust are less likely to report psychological distress. Social connectedness within the family, neighbourhood and school thus appear to be important factors influencing mood among young people. Other studies also support these results and suggest that social capital is related to psychological health and predicts healthy behaviour in young people<sup>7</sup>.

Another study found that the mental health of high school students positively correlates with the social capital of family, society, community, and peer groups. Adolescents with higher sociocultural capital generally live in a relatively good community and attend quality high schools because of the school district policy, so they have a better living, growing, and learning environment. At the same time, parents with a higher education level and a better occupation can give timely and effective guidance when adolescents have psychological stress or psychological problems. High school students are facing the pressure of college entrance exams and are in a transition period to adulthood. At a time of physical and psychological transition, they are prone to having psychological problems and need timely and effective support from their families, schools, communities, and peers<sup>26</sup>. Results of this study that analysed Chinese high school students also suggest that higher levels of social capital is connected to lower levels of reported psychological distress.

A study on mental health problems in Chinese high school students found that the most frequent mental

health problem was academic stress (58.9%). Other problems significantly associated with higher odds of having mental health problems were higher grades, physical disease, alcohol consumption, engagement in sexual behaviour or residence on campus. The authors suggest that prevention in high school students with mental health issues should be strengthened<sup>27</sup>. Improving student's social capital could lead to students that are less likely to report psychological distress which is supported by this study.

Previous studies show that higher levels of family, neighbourhood and school social control were associated with higher development in adolescents and their well-being<sup>28,29</sup>. Social capital is a multidimensional concept, and it affects adolescents significantly. Strong family ties were connected with promoting achievement<sup>30</sup>. Social capital in family was better in predicting cognitive ability than neighbourhood level conditions<sup>31</sup>.

Social capital is also viewed as a multifaceted phenomenon and different aspects of social capital may affect mental health in different ways. Vilhjaldsdottir<sup>32</sup> et. al. show in their study how different facades of social capital are differently associated with emotional distress. Their findings support that social capital benefits adolescent mental health and wellbeing. Authors also show that neighbourhood income inequality has a contextual effect on adolescent emotional problems. Neighbourhoods with greater income inequality report more emotional distress than neighbourhood with lesser income inequality<sup>31</sup>.

## Conclusion

Finally, this study also has several limitations. There are 16 municipal districts in Beijing, with uneven development levels and educational resources within the city and the suburban districts, as well as within different districts. Xicheng District and Haidian District have the most high-quality educational resources in the city. The distribution of each district is not uniform in the selection of the sample, which also affects the representation of the sample to some extent. Secondly, high school students represent a specific group, especially senior students who are facing college entrance exams and have greater school pressure with more learning requirements, which makes them more vulnerable to having psychological problems. High school freshmen have an adjustment and transition period from middle school to high school, and they are also more likely to have anxiety problems dealing with the new

environment, teachers, and classmates. We must consider the area where the participants live because it can affect the collected data. The level of socioeconomic development in Beijing has the leading position in the country, and most parents also have high socioeconomic status. This data may not represent the national level of high school students' mental health by the degree of sociocultural capital, but it could represent it to some extent. Data was collected during the coronavirus pandemic, and during that period some courses were conducted online, which reduced student outdoor activities and other gathering activities, which may also have had an impact on student mental health to some extent. The measurement of mental health problems of high school students and the measurement of sociocultural capital of high school students are

both self-assessments of high school students, which may also have some deviations from the objective reality.

Considering the results of this study interventions should be considered in schools that are focused on improving social capital in young people as a mean for reducing psychological distress. Schools should enforce student-teacher mentoring systems, student tutoring system to strengthen interpersonal trust and vertical school trust. Educational workshops for parents and children should be organised more frequently to improve family social capital. Social connections should be strengthened between people and groups within the community, neighbourhood and organizations with the goal of improving social capital in young people and thus reducing psychological distress.

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## **POVEZANOST RAZLIČITIH DOMENA DRUŠTVENOG KAPITALA S RIZIKOM PSIHIČKIH POREMEĆAJA KOD SREDNJOŠKOLSKIH UČENIKA U KINI**

### **SAŽETAK**

Pokazalo se da društveni kapital ima pozitivnu povezanost s više zdravstvenih ishoda među mladima. Studije sugeriraju da je društveni kapital važan prediktor za zdravlje i dobrobit djece i adolescenata, uključujući i njihovo mentalno zdravlje. Ovim istraživanjem proučavala se povezanost različitih domena društvenog kapitala— u obitelji, u susjedstvu i školi – s rizikom psihičkih poremećaja među srednjoškolcima u Kini. Provedeno je transverzalno istraživanje nad 501 učenicom srednjih škola (217 mladića i 284 djevojaka), u dobi od 15 do 19 godina, u školskoj godini 2020.–2021. Logističkom regresijom ispitana je povezanost obiteljskog, susjedskog i školskog socijalnog kapitala s rizikom psihičkih poremećaja, uz korištenje Kessler-6 ljestvice. Rezultati ovog istraživanja pokazuju da je manje vjerojatno da mladi s višom razinom obiteljske podrške, višom razinom povjerenja u susjedstvu i višom razinom međusobnog povjerenja u odnosu nastavnik-učenik prijave visoku razinu rizika psihičkih poremećaja. Društvena povezanost s obitelji, susjedstvom i školom pokazuje se stoga kao važan faktor koji utječe na raspoloženje među mladima.