



# The Relationship of Social Capital with Lifestyle Among Adolescents: A Cross-Sectional Descriptive-Analytic Study

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## Abstract

**Background:** Lifestyle is a set of health-promoting behaviors, which empower individuals to maintain and promote their health and prevent illnesses. Poor lifestyle habits in adolescence endanger individuals' health in adulthood. The present study was performed to analyze the relationship between social capital and lifestyle among a group of Iranian adolescents.

**Methods:** This cross-sectional descriptive-analytic study was performed during year 2014. A stratified random sample of 400 tenth-, eleventh- and twelfth-year students was recruited from boys' and girls' high schools located in Birjand, Iran. Data were collected via a demographic questionnaire, the social capital index, and the adherence to a healthy lifestyle questionnaire. The data were entered in the SPSS software (v. 16). Descriptive statistics measures, such as frequency, mean, and standard deviation, were used to describe the data. Moreover, pearson and spearman correlation analyses, one-way analysis of variance, stepwise regression analysis, as well as independent-sample t, Mann-Whitney U, and Kruskal-Wallis tests were performed for data analysis.

**Results:** Most participants had good social capital and a moderately healthy lifestyle. Social capital was positively correlated with lifestyle ( $r = 0.49$ ;  $P < 0.001$ ). Stepwise regression analysis showed that gender and social capital explained 33% of the total variance of lifestyle ( $R^2 = 0.33$ ;  $F = 100.52$ ; and  $P < 0.001$ ).

**Conclusions:** Improvement of adolescents' social capital could promote their lifestyle.

**Keywords:** Adolescent, Lifestyle, Social Capital

## 1. Background

The world health organization defines adolescence as an age of 10 to 19 years (1). Because of rapid physical, psychological, social, cultural, and cognitive changes, adolescents usually face a complex set of problems, which could endanger their health (2, 3). These changes shape their lifestyle (4).

Lifestyle is a set of health-promoting behaviors, which empower individuals to maintain and promote their health and prevent illnesses. Lifestyle consists of a wide range of components such as a balanced diet, adequate sleep and rest, physical activity and exercise, body weight control, lack of smoking, alcohol non-consumption, and immunization against diseases (4). Lifestyle can effect quality of life and disease prevention. Studies in the United States have revealed that about 53% of all deaths are in some ways related to lifestyle (5, 6).

Adolescence is a critical period for lifestyle modification. Poor lifestyle habits in adolescence endanger health in adulthood (7). Lifestyle formation is a very complex pro-

cess, which is affected by numerous internal and external factors, such as family, school, and peers (4). Identification and modification of these factors could facilitate the promotion of adolescents' lifestyle.

Nurses, particularly community health nurses, have significant roles in education and promotion of healthy behaviors at the community level (8). School nurses are in direct contact with adolescents and thus could promote their health (9).

Adolescents' behaviors, including their high-risk behaviors, are affected by their significant others, including peers and family members (10). In other words, their lifestyle is affected by their social interactions or social capital. In the recent years, considerable attention has been paid to the role of social capital in promoting physical and mental health (11). As a key concept in sociology, social capital is defined as a set of social system norms, which result in the collaboration of group members and reduction of costs of exchanges and interactions in a society. In other words, people generate social capital through a social insti-

tution. The benefits of social capital include group members' aid and moral support for each other (12).

Social capital was found to be directly correlated with quality of life (13). Moreover, previous studies showed that it is a significant factor behind obesity, diabetes mellitus, physical activity, and cigarette smoking among adolescents (14-16). Tonts (2005) also found social capital to be effective in promoting personal health (11).

Due to the significant role of healthy lifestyle in promoting physical and mental health, public empowerment in the area of healthy lifestyle adoption and lifestyle modification is a major challenge in different countries, including Iran (17). Social capital and lifestyle seem to be interrelated. However, the online literature search (in databases, such as Google Scholar, PubMed, Scientific Information Database, Magiran, and IranMedex) using the keywords of "social capital", "lifestyle", and "adolescent", revealed that no study has yet examined the relationship between social capital and lifestyle among Iranian adolescents. In contrary to western societies, there is a collective culture in the Iranian society, which values social networks and support (18). Thus, the results of studies conducted in other countries may be ungeneralizable to Iranian adolescents. The present study was done to analyze the relationship between social capital and lifestyle among a group of Iranian adolescents.

## 2. Methods

This cross-sectional descriptive-analytic study was done during year 2014 on tenth-, eleventh- and twelfth-year high school students residing in Birjand, Iran. As a similar study on the relationship between social capital and lifestyle in Iran could not be found, a pilot study was done and the results were used for sample size calculation. Consequently, 400 students were found to be needed for the study ( $\alpha = 0.05$ ;  $\delta = 10.64$ ; and  $d = 0.1 \delta$ ). Students were selected via stratified random sampling. Accordingly, Birjand city was divided to 4 geographical regions, namely north, east, south, and west. Then, a boys' and a girls' high school were randomly selected from each region. Afterwards, a predetermined proportion of students were randomly selected from each educational grade. Students were recruited if they were willing to participate, gave informed consent for participation, and lived with both of their parents.

Study data were collected via a demographic questionnaire, the social capital index, and the adherence to a healthy lifestyle questionnaire. The demographic questionnaire included items such as age, gender, educational grade, and parents' educational status and income.

Social capital index (SCI) was developed during year 2014 by Beilmann et al. (19). It includes 26 items in 4 main dimensions, namely parental acceptance-rejection (10 items), intimacy with parents (3 items), admiration by parents (3 items), and peer acceptance (10 items). The items of the first dimension are scored from 1 (Never) to 4 (Always), while the items of the second and the third dimensions are scored from 1 (Never) to 5 (Always). Finally, the items of the fourth dimension are scored from 1 (completely disagree) to 5 (completely agree). Thus, the total SCI score would be 26 to 120, which was interpreted in the present study as follows; 26 to 57: poor social capital; 58 to 90: moderate social capital; and 91 to 120: good social capital. For the purposes of the present study, SCI was initially translated from English to Persian by 2 independent translators. Then, the 2 translations were compared and a single Persian translation was generated. After that, the Persian SCI was back-translated to English by another translator. The English SCI and the original SCI were compared, discrepancies were resolved, and necessary amendments were made to the Persian SCI. The content validity of the Persian SCI was assessed through content validity index (CVI) calculation. Accordingly, 6 experts were asked to comment on the relevance of each SCI item on a 4-point scale as follows: "Irrelevant": 1; "somehow relevant": 2; "relevant": 3; and "completely relevant": 4. Then, the CVI of each item was calculated via dividing the number of experts, who rated that item as either 3 or 4, by the total number of all experts, i.e. 6. As indicated by previous studies, when the number of experts was 6 or more, the minimum acceptable CVI was 0.78 (20, 21). The CVI values in the present study were 0.83 to 1. Moreover, the total CVI value was 0.93. The reliability of SCI was assessed using the test-retest stability technique. Consequently, thirty students, who were not included in the study yet met the inclusion criteria, were asked to complete SCI twice with a 2-week interval. The test-retest Pearson correlation coefficient was 0.91, denoting acceptable SCI stability. The Cronbach's alpha of SCI and its dimensions were 0.83 and 0.66 to 0.90, respectively.

Adolescent healthy lifestyle questionnaire (AHLQ) was developed in 2012 by Taymoori et al. (22) based on the items of the existing questionnaires in the area of lifestyle and health-promoting behaviors, such as the health-promoting lifestyle profile II (23). The AHLQ consists of 36 items, which are scored from 1 (Never) to 5 (Always). The 6 dimensions of AHLQ include nutrition (6 items), physical activity (6 items), health responsibility (8 items), stress management (4 items), social support (5 items), spiritual growth and self-actualization (7 items). The total score of AHLQ could range from 36 to 180 and is interpreted as unhealthy (a score of 36 to 84), moderately healthy (a score of 85 to 133), and healthy (a score of 134 to

180) lifestyle (24). Taymoori et al. (2012) used AHLQ to assess the health-promoting lifestyle of a group of Iranian adolescents and reported a Cronbach's alpha of 0.82 (22).

This study was approved by the institutional review board and the research ethics committee of Birjand University of Medical Sciences, Birjand, Iran, with codes of 53.93 and IR.BUMS.REC.1394.401, respectively. Before referring to the study settings, necessary permissions were obtained from the institutional review board of the university, Birjand department of education, and the administrators of the high schools. The researchers then referred to the selected high schools, recruited eligible students, and asked them to complete the data collection tools. Students were informed that participation was voluntary and the data would be managed confidentially. Data collection lasted for 2 weeks.

The data were entered in the SPSS software (v. 16). Normality testing was performed using the Kolmogorov-Smirnov test. The results of the test showed that the scores of AHLQ and its health responsibility and physical activity dimensions were distributed normally ( $P > 0.05$ ). However, the scores of the other 4 dimensions, i.e. spiritual growth and self-actualization, social support, nutrition, and stress management, as well as the scores of SCI and all its dimensions were distributed non-normally ( $P < 0.05$ ). Descriptive statistics measures, such as frequency, mean, and standard deviation, were used to describe the data. Moreover, statistical tests and methods, such as Pearson and Spearman correlation analyses, one-way analysis of variance, and independent-sample t, Mann-Whitney U, and Kruskal-Wallis tests were performed for data analysis. Stepwise multiple linear regression analysis was done to predict lifestyle, based on social capital and demographic characteristics. The level of significance was less than 0.05.

### 3. Results

In total, 200 male and 200 female students participated in this study. Table 1 shows their demographic characteristics. Statistical analysis revealed that male students' lifestyle was significantly better than their female counterparts ( $P < 0.001$ ). Moreover, a significant difference was found among students' social capital according to fathers' different levels of educational status. Post hoc analysis using the Mann-Whitney U test indicated that students whose fathers had high-school diploma had a significantly higher social capital compared with students whose fathers held university degrees ( $z = -0.009$ ;  $P = 0.003$ ; Table 1).

Total scores of social capital and lifestyle are presented in Table 2. The mean scores of social capital and lifestyle were  $89.06 \pm 12.87$  and  $122.88 \pm 23.22$ , respectively. Most

students had good social capital (52.3%) and moderately healthy lifestyle (65.2%).

Social capital was significantly correlated with lifestyle ( $r = 0.49$ ;  $P < 0.001$ ). Furthermore, except for the correlation of the peer acceptance dimension of social capital with the health responsibility and the nutrition dimensions of lifestyle ( $P > 0.05$ ), the correlations of the other dimensions of social capital with the other dimensions of lifestyle were significant and positive ( $P < 0.05$ ; Table 3).

Stepwise multiple linear regression analysis was performed to determine whether demographic characteristics and social capital could predict lifestyle. In the first step, social capital total score was entered in the regression model, while in the second step, gender was entered. The results revealed that social support ( $B = 0.93$ ;  $T = 12.67$ ) and gender ( $B = -12.24$ ;  $T = -6.45$ ) were significant predictors for lifestyle and explained 33% of its total variance (Table 4).

### 4. Discussion

The aim of this study was to analyze the relationship between social capital and lifestyle among a group of Iranian adolescents. Findings revealed that most participants had good social capital. This finding contradicts the findings of a study by Campos et al. (2013) on adolescents (25). Notably, part of this inconsistency may stem from differences in school and family environments. Baum and Ziersch (2003) considered positive connectedness with school and teachers as well as a safe educational environment as factors behind a good social capital (26). On the other hand, social capital in adolescence has been closely related to family. Family is a good example of social capital so much so that "family social capital" was introduced as an important aspect of social capital. Adolescents, who have positive relationships with their parents, feel their parents' compassion, receive their support, and have no significant conflict with them, are less likely to report their problems (27).

Pherson et al. (2013) studied the role of social capital on the health and well-being of children and adolescents and found living with both parents more effective than living with one parent, stepfather, or stepmother in promoting social capital (28). Good social capital among participants of the present study could be attributed to the fact that living with both parents was among the inclusion criteria.

Study findings also showed that most participants had a moderately healthy lifestyle. Contrarily, Singh et al. (2006) found poor lifestyle among their participating adolescents (29). Lifestyle is affected by numerous factors, such as economic and educational status, values, gender, age, and sociocultural capital. The most important factor behind lifestyle is deemed to be economic status. In fact,

**Table 1.** The Mean Scores of Lifestyle and Social Capital Based on Demographic Characteristics

Demographic Characteristics	N (%)	Social Capital, Mean $\pm$ SD	Lifestyle, Mean $\pm$ SD
<b>Gender</b>			
Female	200 (50)	12.28 $\pm$ 89.15	20.08 $\pm$ 116.84
Male	200 (50)	13.47 $\pm$ 88.97	24.59 $\pm$ 128.92
P value	-	0.9	0.001 >*
<b>Educational grade</b>			
Tenth	132 (33)	13.69 $\pm$ 88.31	22.1 $\pm$ 121.15
Eleventh	133 (33.2)	13.32 $\pm$ 88.6	25.89 $\pm$ 123.77
Twelfth	135 (33.8)	11.55 $\pm$ 90.23	21.53 $\pm$ 123.69
P value	-	0.61	0.58
<b>Fathers' educational status</b>			
Below-diploma	76 (19)	13.16 $\pm$ 89.8	23.39 $\pm$ 123.89
Diploma	153 (38.2)	11.72 $\pm$ 91.27	20.72 $\pm$ 125.04
Associate diploma	77 (19.2)	12.96 $\pm$ 87.44	24.62 $\pm$ 122.87
Bachelor's and higher	94 (23.5)	13.81 $\pm$ 86.16	25.46 $\pm$ 118.56
P value	-	0.017*	0.19
<b>Mothers' educational status</b>			
Below-diploma	103 (25.8)	13.15 $\pm$ 89.35	23.02 $\pm$ 122.37
Diploma	145 (36.2)	11.02 $\pm$ 90.82	21.50 $\pm$ 124.21
Associate diploma	80 (20)	12.52 $\pm$ 86.12	25.13 $\pm$ 12.08
Bachelor's and higher	72 (18)	15.67 $\pm$ 88.34	24.90 $\pm$ 123.26
P value	-	0.074	0.75
<b>Parents' monthly income (Dollars)</b>			
Less than 250	96 (24)	12.49 $\pm$ 88.41	22.4 $\pm$ 119.82
250 - 750	256 (64)	13.09 $\pm$ 88.7	23.31 $\pm$ 123.57
More than 250	48 (12)	12.29 $\pm$ 92.22	24.24 $\pm$ 125.38
P value	-	0.24	0.29

**Table 2.** Categorization of Lifestyle and Social Capital Scores

Variable	Poor	Moderate	Good
Social capital	2%	45.8%	52.3%
Lifestyle	4.5%	65.2%	30.2%

economic status determines social classes and thereby, lifestyle. Thus, some scholars even believe that lifestyle is shaped in continuous interaction with the materialistic culture (30). Zare and Falah (2012) also reported the positive correlation between young people's lifestyle and their economic status (31). Another factor behind lifestyle is age. As people grow older, their past experiences turn into a resource for shaping their lifestyle, consumption patterns,

and physical activity habits (30). Consequently, moderately healthy lifestyle of adolescents, who participated in the present study, could be related to the fact that about 64% of them had a medium economic status and most of them were adolescents.

The findings of the present study also showed healthier lifestyle among male students. However, Singh et al. (2006) reported an opposite finding (29). Moshki and

**Table 3.** The Correlations of Social Capital and Its Dimensions with Lifestyle and Its Dimensions

Variables	Lifestyle	Spiritual Growth	Health Responsibility	Nutrition	Social Support	Physical Activity	Stress Management
<b>Social capital</b>	$r = 0.49$	$r = 0.48$	$r = 0.41$	$r = 0.26$	$r = 0.50$	$r = 0.19$	$r = 0.36$
	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$
<b>Parental acceptance</b>	$r = 0.45$	$r = 0.75$	$r = 0.82$	$r = 0.60$	$r = 0.68$	$r = 0.66$	$r = 0.75$
	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$
<b>Intimacy with parents</b>	$r = 0.46$	$r = 0.41$	$r = 0.14$	$r = 0.26$	$r = 0.45$	$r = 0.20$	$r = 0.34$
	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$
<b>Admiration by parents</b>	$r = 0.51$	$r = 0.46$	$r = 0.44$	$r = 0.28$	$r = 0.46$	$r = 0.22$	$r = 0.42$
	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$	$P < 0.001$
<b>Peer acceptance</b>	$r = 0.1$	$r = 0.17$	$r = 0.08$	$r = 0.007$	$r = 0.25$	$r = 0.03$	$r = 0.13$
	$P < 0.001$	$P < 0.001$	$P = 0.08$	$P = 0.08$	$P < 0.001$	$P = 0.04$	$P = 0.007$

**Table 4.** The Results of Stepwise Regression Analysis for Lifestyle Prediction<sup>a</sup>

	B	$\beta$	t	R <sup>2</sup>	Adjusted R <sup>2</sup>	F
<b>Constant</b>	45.78		6.83	0.33	0.33	100.52 <sup>b</sup>
<b>Social capital</b>	0.93	0.51	12.67			
<b>Gender</b>	-12.24	-0.26	-6.45			

<sup>a</sup>Step 1, Social capital; Step 2, Gender.<sup>b</sup> $P < 0.05$ .

Torabi (2014) also reported that lifestyle was not correlated with gender. They found that the mean score of male adolescents' subjective norms in rejecting alcohol and cigarette was greater than female adolescents and the mean score of female adolescents' nutrition was greater than their male counterparts (32).

It was also found that male students obtained higher physical activity scores than female students. Harrison et al. (2007) showed that because of feeling greater security, male students were more likely to engage in physical activity (27). Moshki and Torabi (2014) noted that engagement in physical activity was directly affected by family support. In other words, family support was a facilitator to engagement in physical activity (32).

The study findings also showed a significant correlation between social capital and parents' educational status. In other words, the social capital mean score of adolescents whose fathers had high school diploma was significantly lower than students whose fathers held higher degrees. This finding contradicts Bourdieu's theory, which states that educational status is directly correlated with social capital. In other words, people with lower educational status have lower socioeconomic status and thus, lower social capital (33). On the other hand, Coleman (1994)

reported that the more help and support people receive from each other, the more social capital will be generated among them (34). Parents with lower educational status in the present study might have been less busy and more free to be with and support their children.

Another finding of the present study was the direct correlation of social capital with lifestyle. This is in line with the findings of a study by Loch et al. (2015) on Brazilian adults (35). Moreover, this finding was connotatively reported by several earlier studies. For instance, Thorlindson et al. (2012) reported that greater social capital was associated with lower likelihood of smoking among adolescents (16). Besides, Belgorian et al. (2012) reported social capital as a significant factor behind participation in physical activity (15). Similarly, Holtgrave et al. (2006) found this as a protective factor against obesity and diabetes mellitus (14). The effects of social capital on lifestyle are mainly due to social networks and their norms. Social networks, such as the peer network, have a significant role in shaping and modifying behaviors (30). Social capital improves self-efficacy and enables individuals establish healthy interpersonal relationships, perform their activities, effectively, feel empowered in performing their activities, and have greater hope and self-confidence in stressful condi-



tions (36-38). Individuals with greater self-efficacy are expected and more likely to attempt for health maintenance and promotion, and disease prevention.

Multiple linear regression in the present study revealed that social capital and gender explained about 33% of the variance of lifestyle. Therefore, these factors should be taken into account when developing programs for promoting adolescents' lifestyle. Previous studies also reported the positive effects of social capital on different aspects of physical and mental health (11).

Most risk factors for developing health problems are shaped during adolescence (12, 39). Given the significant role of social capital in shaping adolescents' lifestyle, community health nurses can incorporate this in their health education, behavior modification, disease prevention, and health promotion programs and interventions in order to improve their effectiveness. Social capital improvement is expected to modify adolescents' lifestyle.

One of the limitations of the present study was that it was done via a descriptive design. Further studies are needed to evaluate the causal relationships among demographic variables, lifestyle, and social capital. Moreover, study data were collected using self-report questionnaires. Triangulating the source of data in future studies may produce more credible results.

#### 4.1. Conclusion

Improvement of adolescents' social capital could promote their lifestyle.

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#### References

- World Health Organization. *Adolescent health*. Geneva: World Health Organization; 2016. Available from: [http://www.who.int/topics/adolescent\\_health/en/](http://www.who.int/topics/adolescent_health/en/).
- Hockenberry MJ, Wilson D. *Evolve resources for wongs essentials of pediatric nursing*. 9 ed. United States: Mosby; 2013.
- DiClemente RJ, Santelli JS, Crosby RA. *Adolescent health, understanding and preventing risk behaviors*. USA: Jossey Bass; 2009.
- Monahan F, Sands J, K, Neighbors M, Marek J, F, Green C, J. *Phipps medical surgical nursing, health and illness perspectives*. 8 ed. Chicago, United States: Mosby; 2006.
- He K, Kramer E, Houser RF, Chomitz VR, Hacker KA. Defining and understanding healthy lifestyles choices for adolescents. *J Adolesc Health*. 2004;**35**(1):26-33. doi: [10.1016/j.jadohealth.2003.09.004](https://doi.org/10.1016/j.jadohealth.2003.09.004). [PubMed: [15193571](https://pubmed.ncbi.nlm.nih.gov/15193571/)].
- Lanckster J, Stanhope M. *Public health nursing*. 8 ed. Chicago, United States: Mosby; 2012.
- Khuwaja AK, Khawaja S, Motwani K, Khoja AA, Azam IS, Fatmi Z, et al. Preventable lifestyle risk factors for non-communicable diseases in the Pakistan Adolescents Schools Study 1 (PASS-1). *J Prev Med Public Health*. 2011;**44**(5):210-7. doi: [10.3961/jpmp.2011.44.5.210](https://doi.org/10.3961/jpmp.2011.44.5.210). [PubMed: [22020186](https://pubmed.ncbi.nlm.nih.gov/22020186/)].
- Musavian AS, Pasha A, Rahebi SM, Atrkar Roushan Z, Ghanbari A. Health promoting behaviors among adolescents, a crosssectional study. *Nurs Midwifery Stud*. 2014;**3**(1):14560. [PubMed: [25414892](https://pubmed.ncbi.nlm.nih.gov/25414892/)].
- Council on School H. The role of the school nurse in providing school health services. *J Sch Nurs*. 2008;**24**(5):269-74. doi: [10.1177/1059840508323781](https://doi.org/10.1177/1059840508323781). [PubMed: [18941150](https://pubmed.ncbi.nlm.nih.gov/18941150/)].
- Tome G, Matos M, Simoes C, Diniz JA, Camacho I. How can peer group influence the behavior of adolescents: explanatory model. *Glob J Health Sci*. 2012;**4**(2):26-35. doi: [10.5539/gjhs.v4n2p26](https://doi.org/10.5539/gjhs.v4n2p26). [PubMed: [22980148](https://pubmed.ncbi.nlm.nih.gov/22980148/)].
- Tonts M. Competitive sport and social capital in rural Australia. *J Rural Stud*. 2005;**21**(2):137-49. doi: [10.1016/j.jrurstud.2005.03.001](https://doi.org/10.1016/j.jrurstud.2005.03.001).
- Fukuyama F. Social capital and development, the coming Agenda. *SAIS Rev*. 2002;**22**(1):23-37. doi: [10.1353/sais.2002.0009](https://doi.org/10.1353/sais.2002.0009).
- Baker WE. *Achieving success through social capital, tapping the hidden resources in your personal and business networks*. United States, Hoboken: Jossey Bass; 2012.
- Holtgrave DR, Crosby R. Is social capital a protective factor against obesity and diabetes? Findings from an exploratory study. *Ann Epidemiol*. 2006;**16**(5):406-8. doi: [10.1016/j.annepidem.2005.04.017](https://doi.org/10.1016/j.annepidem.2005.04.017). [PubMed: [16246583](https://pubmed.ncbi.nlm.nih.gov/16246583/)].
- Belgorian M, Parsamehr M, Saeedi Madani M. The relationship between social capital and physical activity participation. *Sport Manag*. 2012;**17**:109-27.
- Thorlindsson T, Valdimarsdottir M, Hrafn Jonsson S. Community social structure, social capital and adolescent smoking: a multi-level analysis. *Health Place*. 2012;**18**(4):796-804. doi: [10.1016/j.healthplace.2012.03.013](https://doi.org/10.1016/j.healthplace.2012.03.013). [PubMed: [22503516](https://pubmed.ncbi.nlm.nih.gov/22503516/)].
- Ochieng BM. Factors affecting choice of a healthy lifestyle: implications for nurses. *Br J Community Nurs*. 2006;**11**(2):78-81. doi: [10.12968/bjcn.2006.11.2.20445](https://doi.org/10.12968/bjcn.2006.11.2.20445). [PubMed: [16493312](https://pubmed.ncbi.nlm.nih.gov/16493312/)].
- Aflakseir A. The role of social support and coping strategies on mental health of a group of Iranian disabled war veterans. *Iran J Psychiatry*. 2010;**5**(3):102-7. [PubMed: [22952501](https://pubmed.ncbi.nlm.nih.gov/22952501/)].
- Beilmann M, Mayer B, Kasearu K, Realo A. The Relationship between adolescents social capital and individualism collectivism in estonia, Germany, and Russia. *Child In Res*. 2014;**7**(3):589-611. doi: [10.1007/s12187-014-9232-z](https://doi.org/10.1007/s12187-014-9232-z).
- Lynn MR. Determination and quantification of content validity. *Nurs Res*. 1986;**35**(6):382-5. [PubMed: [3640358](https://pubmed.ncbi.nlm.nih.gov/3640358/)].
- Davis LL. Instrument review, getting the most from a panel of experts. *Appl Nurs Res*. 1992;**5**(4):194-7. doi: [10.1016/s0897-1897\(05\)80008-4](https://doi.org/10.1016/s0897-1897(05)80008-4).
- Taymoori P, Moeini B, Lubans D, Bharami M. Development and psychometric testing of the Adolescent Healthy Lifestyle Questionnaire. *J Educ Health Promot*. 2012;**1**:20. doi: [10.4103/2277-9531.99221](https://doi.org/10.4103/2277-9531.99221). [PubMed: [23555123](https://pubmed.ncbi.nlm.nih.gov/23555123/)].
- Walker SN, Sechrist KR, Pender NJ. The health promoting lifestyle profile, development and psychometric characteristics. *Nurs Res*. 1987;**36**(2):76-81. doi: [10.1097/00006199-198703000-00002](https://doi.org/10.1097/00006199-198703000-00002). [PubMed: [3644262](https://pubmed.ncbi.nlm.nih.gov/3644262/)].
- Mirghafourvand M, Mohammad-Alizadeh-Charandabi S, Tavanezhad N, Karkhaneh M. Health-promoting lifestyle and its predictors among Iranian adolescent girls, 2013. *Int J Adolesc Med Health*. 2014;**26**(4):495-502. doi: [10.1515/ijamh-2013-0324](https://doi.org/10.1515/ijamh-2013-0324). [PubMed: [24262646](https://pubmed.ncbi.nlm.nih.gov/24262646/)].
- Campos AC, Borges CM, Leles CR, Lucas SD, Ferreira EF. Social capital and quality of life in adolescent apprentices in Brazil, an exploratory study. *Health*. 2013;**5**(6):973-80. doi: [10.4236/health.2013.56128](https://doi.org/10.4236/health.2013.56128).

26. Baum FE, Ziersch AM. Social capital. *J Epidemiol Community Health*. 2003;**57**(5):320–3. [PubMed: [12700212](#)].
27. Harrison RA, Gemmell I, Heller RF. The population effect of crime and neighbourhood on physical activity: an analysis of 15,461 adults. *J Epidemiol Community Health*. 2007;**61**(1):34–9. doi: [10.1136/jech.2006.048389](#). [PubMed: [17183012](#)].
28. Pherson K, Kerr S, Gee EM, Cheater F, Morgan A. The role and impact of social capital on the health and wellbeing of children and adolescents, a systematic review. glasgow centre for population health. *Glasgow Cent Popul Health*. 2013:1–86.
29. Singh AK, Maheshwari A, Sharma N, Anand K. Lifestyle associated risk factors in adolescents. *Indian J Pediatr*. 2006;**73**(10):901–6. [PubMed: [17090902](#)].
30. Olfat S, Salemi A. Lifestyle concept. *J Lifestyle Stud*. 2012;**1**(1):36–9.
31. Zare B, Falah M. Assessment of the young persons lifestyle and the affective factors. *J Cult Stud*. 2012;**4**(5):105–75.
32. Moshki M, Torabi FS. Lifestyle factors and their association with some relevant factors in adolescence using the theory of planned behavior. *J Mazand Univ Med Sci*. 2014;**23**(2):117–26.
33. Bourdieu P. *Handbook of theory and research for the sociology of education*. In: Richardson J, editor. New York: Green wood; 1986. The forms of capital.
34. Coleman J. *Foundation of social theory*. Cambridge: Harvard University press; 1994.
35. Loch MR, Souza RK, Mesas AE, Martinez-Gomez D, Rodriguez-Artalejo F. Relationship between social capital indicators and lifestyle in Brazilian adults. *Cad Saude Publica*. 2015;**31**(8):1636–47. doi: [10.1590/0102-311X00132614](#). [PubMed: [26375643](#)].
36. Stajkovic AD. *Presented to the academy of management national meeting*. In: Organizational Behavior Division, editor. Washington, Seattle; 2003. Introducing positive psychology to work motivation, Development of a core confidence model.
37. Bandura A. Self-efficacy: toward a unifying theory of behavioral change. *Psychol Rev*. 1977;**84**(2):191–215. [PubMed: [847061](#)].
38. Ciarrochi JV, Deane FP. Emotional competence and willingness to seek help from professional and nonprofessional sources. *Br J Guid Counc*. 2001;**29**(2):233–46. doi: [10.1080/03069880124843](#).
39. Diclemente RJ, Hansen WB, Ponton LE. *Handbook of adolescent health risk behavior*. Boston, MA: Springer; 2009. Adolescents at risk, a generation in jeopardy; p. 3–6.