Effects of Social Support on Adolescent Identity Development

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Abstract

This research explores the complex interconnection between self-concept development and various forms of social support, including support from parents, peers, and adults, during adolescence. Adolescence plays a crucial role in shaping an individual's sense of self and identity, and social influence serves as a pivotal factor in this process (19). During this transformative stage, individuals are particularly sensitive to the feedback and support they receive from their social networks, as it can significantly impact how they perceive themselves and construct their self-concept (5). Using data from Wave 2 of the National Longitudinal Study of Adolescent to Adult Health, or Add Health, and a multiple linear regression, here we examined relations between social support and self-concept development in students grades 7-12 (at baseline N=20,745). It was hypothesized that the interaction between parent and peer support is expected to positively influence adolescent self-concept. The result of this analysis revealed that the interaction between parent and peer support significantly influences adolescent self-concept, with parent and peer support individually showing no direct effects. Additionally, sex differences in self-concept were noted. The results underscore the importance of considering the interplay between various sources of social support in fostering healthy self-concept development in adolescents, carrying practical implications for interventions. By exploring these dynamics, we can gain a deeper understanding of how individuals navigate their sense of self in response to social influences, ultimately shedding light on strategies to foster healthy self-concept development in adolescents and improve their overall well-being.

Introduction

Adolescence is a pivotal period of development characterized by significant psychosocial changes as individuals navigate the complexities of identity formation and self-concept (2). Self-concept can be defined as a foundational element in one's self-esteem, representing an individual's perception and understanding of themselves, developed through different environmental factors around them (1). Recognizing adolescence as a distinct developmental stage is important, as it is a phase marked by resilience and vitality, but it's also a period when psychiatric illnesses can emerge (16). Self-concept formed during adolescence can persist into adulthood. In Ryszewska-Łabędzka and colleagues' study, 300 individuals over the age of 60 were interviewed to assess their self-concept levels using the EASYCare Standard 2010 questionnaire. The results of this study suggest that older adults with higher self-concept scores, meaning they see themselves positively, tend to handle psychosocial challenges more effectively, whereas those who are dissatisfied with life or burdened by negative past experiences typically carry lower self-concept scores from adolescence into adulthood (20). Various types of positive social support, defined as a network of family, friends, neighbors, and community members, have been found to significantly enhance resilience to stress, protect against trauma-related disorders like PTSD, and reduce medical issues and mortality (18). Positive social support networks are known to contribute significantly to the development of a positive self-concept (14).

Parenting and Adolescent Development

The way parents interact with and raise their children can have lasting effects on how children perceive themselves, understand their roles in society, and develop their unique personalities (21). In a longitudinal study involving 497 Dutch families, it was identified that adolescents with parents characterized by strong self-certainty, meaning they have confidence in what they say, tend to experience an increase in their self-concept clarity. Self-concept clarity is defined as the degree to which an individual's beliefs and perceptions about themselves are clearly defined, internally consistent, and stable over time, particularly as they progress through adolescence (2). How a parent provides support, such as empathetic parenting, can also provide children with a sense of security and a boost of confidence (13). For instance, as referenced in Ayoub's study, parents' constant warmth was associated with positive traits in their children, such as extraversion, agreeableness, conscientiousness, and openness to experience (17). This concept aligns with the Social Learning Theory, which was founded on the idea that children adopt behavioral patterns by observing significant individuals, such as their parents, in their surroundings (7). As mentioned in the Social Learning Theory, parents who possess clear and confident self-beliefs, may serve as more influential role models for adolescents exploring their identity compared to parents who have uncertain self-beliefs (2).

Self-Concept Development in Adolescence and the Role of Peers

Self-concept is an evolving set of beliefs an individual holds about themselves (3). Instances of a negative self-concept can stem from factors such as believing statements like "I am a poor student" due to academic struggles and endorsing negative affirmations such as "I am a troublemaker" because of problematic behavior (4). Various environmental factors, with culture as the common thread, contribute to the shaping of self-concept within a child (22). Young individuals are increasingly identifying friends as a substantial source of social and emotional support in their lives as they grow up (10). Negative peer interactions, such as bullying or social rejection, can erode self-concept and result in the internalization of unfavorable self-beliefs. Seeking feedback and validation from peers, adolescents are susceptible to

negative self-concept if they receive predominantly critical or exclusionary feedback (15). The social support that an individual grows up with and the myriad of experiences they encounter throughout their life significantly influence how they perceive themselves, ultimately shaping their self-concept. This influence on their identity can be detrimental, as teenagers with low self-concept in both behavior and academics are more likely to engage in substance use, risky sexual behaviors, and various problem behaviors (4).

Self-Concept Development in Adolescence and the Role of Adults

One factor in adolescents' self-concept development involves their interpersonal relationships, especially those with other adults like teachers, developed during their childhood years (6). Fernández-Zabala's study suggests that positive interpersonal relationships with peers can be valuable for developing social and emotional skills, influencing self-concept, and ultimately impacting an individual's adaptation to their environment (6). In particular, having an additional adult figure such as an athletic coach in an adolescent's life is beneficial. Their presence is linked to a positive self-concept, as it gives a sense of belonging and provides mentorship (4). In Hoferichter's study, it is discussed that, while there are a few studies that use different theories when focusing on social relationships, the authors collectively recognize the positive impact of these relationships on individuals' overall well-being. Some examples of the positive behaviors underlying the positive impact of social relationships adults can display include offering support through providing encouragement, actively listening, and offering guidance to the child (11). Understanding self-concept development is crucial because it allows us to better support individuals in their journey towards a positive self-identity. In turn, this can lead to improved mental and emotional well-being, healthier relationships, and greater overall life satisfaction, as they are finding personal meaning in their lives (22).

The Present Study

Building on extant literature, the present study will examine the influence of different social support examples during adolescence. This study systematically analyzes the influence of various figures, including parents, peers, and adults, across different ages and backgrounds of the participants using the National Longitudinal Study of Adolescent to Adult Health, or Add Health, study. This analysis contributes to a deeper understanding of the impact of social support. Notably, this paper focuses on the proposed sensitive period of adolescence, filling a temporal gap in existing literature that often emphasizes early childhood or later stages of adulthood (8). The data used includes a large sample size, underscoring the strength and applicability of our study's findings, thereby making a noteworthy contribution to the existing body of literature. Additionally, prior literature suggests that adolescence is a period of transition where reliance and modeling of behavior shifts from parents to outside influences, such as peers and other adults (23). Therefore, in the context of self-concept, examining all of these types of social support in tandem will give us a better understanding of how these social supports may differentially impact self-concept. In summary, this assessment enriches the field of adolescent development by offering a nuanced and temporally informed perspective on the intricate interplay between parenting of adolescents and adolescent self-concept, which can inform both research and practical interventions in this crucial area of human development.

Objectives and Hypothesis

The present study aims to examine various types of social support and their impact on adolescent self-concept. Specifically, we will establish the best fitting model, out of (1) parent support alone, (2) peer support moderating parent support, and (3) peer and adult support moderating parent support, for predicting adolescent self-concept. It was hypothesized that the

combined influence of parent support and peer support, as represented by the interaction term in Model 2, is expected to show a positive association with adolescent self-concept. This hypothesis suggests that a higher level of support from both parents and peers will correspond with increased self-concept scores, as compared to scenarios where support comes from a single source or is limited.

Methods

The Add Health study is a comprehensive and nationally representative longitudinal survey that tracks the development of a cohort of adolescents in the United States. The data from this study are publicly available and were utilized for these analyses. In this analysis, data from the second interview wave conducted in 1995–1996, which includes a sample size of 14,738 participants across grades 7 through 12, is considered. The specific subset of data used (N = 884, with 525 females, aged 12-20 years) was determined based on data availability among the participants, introducing variance. This deliberate selection enabled a comprehensive analysis of the relationships explored in the study.

Table 1. *Demographic Factors of the Sample*

Category	Sub-Category	N/Mean (Range)
Sex	Male	359
	Female	525
Age		15.98 (12-20)
Racial Identity	White	590
	Black or African-American	204
	Native American	29
	Asian or Pacific Islander	51
	Other	55
Welfare Status	On Welfare	66
	Not on Welfare	726
	Refused to answer	3

Measures

For the independent variable, we investigated interpersonal relationships involving adolescents and significant figures in their lives, such as interactions between parents and children, associations with peers, and influential adult figures (e.g., teachers). Sample questions assessed the adolescents' perceived closeness with these individuals and the extent to which they felt valued by them. By exploring these various interpersonal dynamics, the study aimed to

capture the multifaceted nature of adolescents' social networks and the potential influences these relationships might have on their self-concept development.

Assessment of Relationship with Parents

Participants were asked to use a 5-point Likert scale to indicate their level of agreement or disagreement with specific statements. An example of statements shown is "{MOM NAME} encourages you to be independent?". Participants were also presented with two questions to gauge their level of emotional closeness to their parents, with the following questions, "How close do you feel to {MOM NAME}?" and "How close do you feel to {DAD NAME}?". Participants had the option to select 1 (not close at all) to 5 (extremely close) for both questions. A summary score was created using the items available. The items related to mothers and fathers were combined to create a single parent support variable. The range is 24 to 62 with lower scores meaning less support for the child. Negatively skewed is evident as the mean (54.55) is slightly less than the median (55.00), indicating an off-center distribution with a tail stretching toward lower values. A histogram also displayed data points concentrated at higher values, affirming the negative skew. Subsequently, a log transformation was applied to align with the model's normality assumption.

Assessment of Relationship with Peers

In relation to peers, participants were asked questions such as, "How much do you feel that your friends care about you?" and statements such as "You feel close to the people at your school". Responses of the questions used a 5-point scale where participants could choose 1 (strongly agree) to 5 (strongly disagree) or 1 (not at all) to 5 (very much) depending on question structure. A summary score was created by adding the items together. The range of the scores is 11 to 29 with lower scores representing less peer support or lower levels of peer involvement.

Assessment of Relationship with Adults

To evaluate the level of care and concern expressed by non-parent adults toward participants, an example of the following questions were presented: "How much do you feel that adults care about you?" and "How much do you feel that your teachers care about you?" . These questions were again rated on a scale from 1 to 5, allowing participants to choose 1 (not close at all) to 5 (extremely close). In these categories, various items were reversely scored when appropriate. A summary score was created by adding the items together. The range of scores is 8 to 27 with lower scores representing limited support from other adults in the child's life.

Self-Concept Assessment

For the dependent variable, self-concept was assessed by summing responses to various questions related to how participants' view themselves. Again by using a 5-point Likert scale, participants were asked to express their level of agreement or disagreement with each statement. For example, one statement in the questionnaire was: "You have a lot to be proud of." This self-reported measure was included in the Add Health data to capture participants' perceptions of themselves.

Statistical Analyses

This study utilizes multiple linear regression including moderation variables to predict and understand the relationship between social support and self-concept levels among adolescents.

A model comparison approach was employed to determine the best-fitting model by reporting the model with the lowest value. Additionally, significant coefficients with a p value < 0.05 will be reported. Only significant unstandardized coefficients will be interpreted, but all unstandardized coefficients will be presented. The analyses were conducted in R (v4.2.3) using the lmer4 (v1.134) package.

Model 1: *Adol. Self$_i$ = β_0 + β_1(Parent Rel.$_i$) + ε_i*

Model 2: *Adol. Self$_i$ = β_0 + β_1(Parent Rel.$_i$) + β_2(Peer Supp.$_i$) + β_3(Parent Rel.$_i$)(Peer Supp.$_i$) + ε_i*

Model 3: *Adol. Self$_i$ = β_0 + β_1(Parent Rel.$_i$) + β_2(Peer Supp.$_i$) + β_3(Parent Rel.$_i$)(Peer Supp.$_i$) + β_4(Adult Supp.$_i$) + β_5(Parent Rel.$_i$)(Adult Supp.$_i$) + β_6(Peer Supp.$_i$)(Adult Supp.$_i$) + β_7(Parent Rel.$_i$)(Peer Supp.$_i$)(Adult Supp.$_i$) + ε_i*
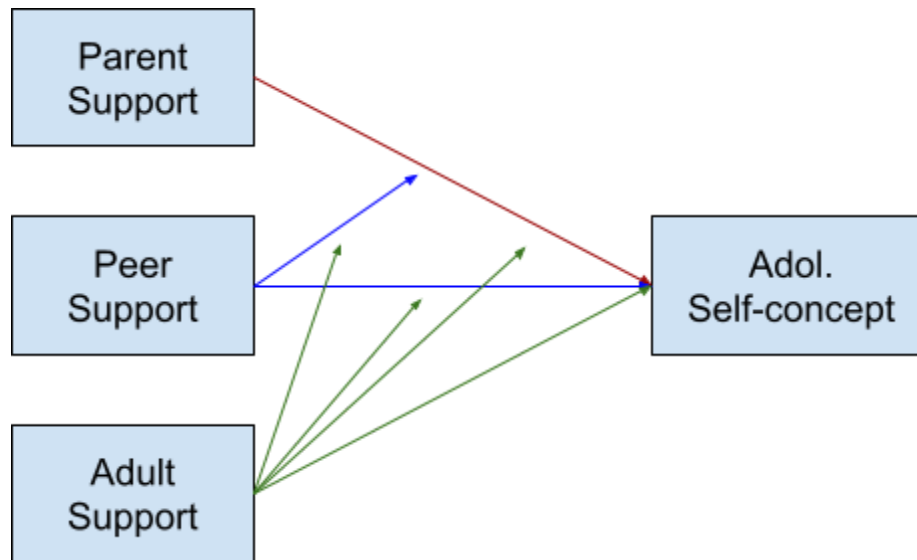

Figure 1. Flowchart of Social Support Models and Interaction Effects on Adolescent Self-Concept. The Models are multiple linear regression models shown by the arrows. Model 1 is parent support predicting adolescent self-concept, indicated by the red arrow. Model 2 is showcasing the main effect of parent support, the main effect of peer support, and an interaction effect of parent and peer support indicated by the blue and red arrows. Model 3 is a main effect of parent support, a main effect of peer support, a main effect of adult support. Additionally, Model 3 includes an interaction effect of parent and peer, parent and adult, peer and adult, and parent, peer, and adult indicated by the green, blue, and red arrows.

Results

Initially, three different models were explored to assess the relationship between social support and self-concept. In the multiple linear regression models, Model 1 included only parent support as a predictor, Model 2 included both parent and peer support and their interaction, and Model 3 added adult support, an interaction between adult and parent support, an interaction between adult and peer support, and a three-way interaction between adult, parent, and peer support (Figure 1). Among the three models, analysis of variance (ANOVA) tests were performed to ultimately determine the best fitting model. The F-statistic was employed in the analysis, using the "anova" function in R to compare various models, and the one with the most significant F statistic was selected as it indicates a better fit to the data and provides statistical evidence for the relationships between examined variables. Based on the criteria, the model that incorporates both parent and peer support, along with their interaction, stands out as the most appropriate fit for our dataset ($F_{(2,879)}$ = 19.02, $p<0.001$).

In the analysis, Model 2, which included both parent and peer support as predictors, emerged as the best-fitting model (Table 1). Notably, parent support and peer support alone did not exhibit significant direct effects on self-concept. However, a compelling finding emerged from the interaction between these two forms of support. The interaction term, representing the joint influence of parent and peer support, was positively associated with self-concept ($t_{(5,879)}$=2.20, $p < 0.05$; Figure 2; Table 1). This indicates that when adolescents report receiving more support from both their parents and peers, their self-concept benefits synergistically. Additionally, the analysis revealed a sex difference in self-concept, with females showing lower self-concept scores compared to males ($t_{(5,879)}$=-2.32, $p < 0.05$; Figure 3; Table 1). The lack of significance related to age suggests relative stability in self-concept within the age range studied (12-20).

Table 1. *Parent and peer support and their interaction predicting adolescent self-concept*

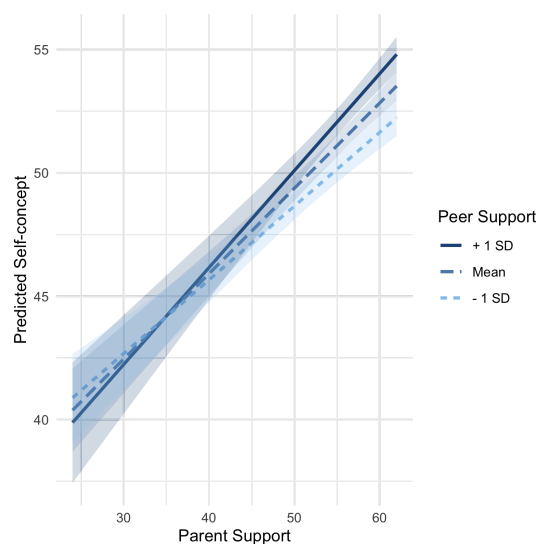|	Estimate	Std. Error	t-value	p-value
Intercept	42.34	8.58	4.93	< 0.001
Parent Sum	-0.00	0.16	-0.03	0.975
Sex	-0.71	0.31	-2.32	0.021*
Age	0.12	0.10	1.24	0.217
Peer Sum	-0.57	0.41	-1.39	0.165
Parent Sum: Peer Sum	0.02	0.01	2.18	0.029*

Note. * p < 0.05.

Figure 2. Peer support moderates the relationship between parent support and self-concept. Parent support (X-axis) predicts adolescent self-concept (Y-axis), with the dark blue solid line indicating more positive peer support, the longer dashed blue line indicating the mean of peer support, and the light blue short dashed line indicating more negative peer support. The graph reveals a positive correlation between parent support and predicted self-concept and additionally suggests that higher levels of parent and peer support are associated with a stronger self-concept among study participants.
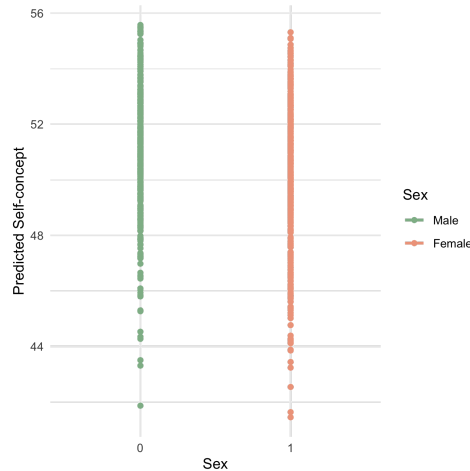

Figure 3. Sex differences in adolescent self-concept. The green data points represent male participants' self-concept scores, and the orange data points represent female participants' self-concept scores. In this study, the males have an on average higher predicted self-concept score than the females.

Discussion

The study reveals that the interaction between parent and peer support significantly influences adolescent self-concept, which supports our hypothesis. This is evident from the statistical analysis, which demonstrates that the combined effect of parent and peer support yields a positive association with self-concept. This aligns with our initial hypothesis, which posited that the interaction between these two sources of support would be beneficial for adolescent self-concept. It is noteworthy that when considered individually, parent and peer support did not exhibit direct effects on self-concept. These findings suggest that the complexity of adolescent self-perception necessitates a combined influence from both parents and peers. It is likely that this interaction provides a more comprehensive and supportive environment for adolescents, fostering positive self-concept.

Furthermore, it is worth noting that the observed results of this study are consistent with several theoretical perspectives. For instance, adolescents may engage in social comparisons and perceive significant support as unfavorable, leading to decreased self-esteem when viewed in isolation. Additionally, during adolescence, the pursuit of autonomy may conflict with perceived excessive support, potentially undermining self-esteem. The finding that the interaction between parent and peer support is positively associated with self-concept underscores the idea that this combined influence addresses these theoretical nuances and is more beneficial for adolescents' self-concept development than either form of support in isolation.

These findings emphasize the importance of considering the combined impact of parent and peer support in fostering healthy self-concept development in adolescents. The results offer strong support for the hypothesis that this combined influence is crucial for self-concept, highlighting the potential benefits of interventions involving both sources of support. Further research should explore the long-term effects of social support and consider additional factors that may influence self-concept during adolescence, contributing to a deeper understanding of this critical aspect of adolescent development.

The finding that females have lower self-concept scores compared to males aligns with some previous research on sex differences in self-concept during adolescence (Kearney-Cooke, 1999). This difference may be influenced by social and cultural factors and warrants further investigation.

The non-significant relationship between age and self-concept suggests that, within the age range of the study participants (12-20), self-concept remains relatively stable over this period. However, it is important to consider that self-concept development may exhibit more variability in different age groups or across longer periods of development.

The results also underscore the importance of considering the interplay between different sources of social support when seeking to understand adolescent self-concept, based on the patterns and relationships observed in the data and analysis presented in the study. Adolescents who receive both positive support from their parents and peers may experience a more robust boost in their self-concept. This finding has practical implications for interventions aimed at promoting healthy self-concept development in adolescents, highlighting the potential benefits of programs that involve both parents and peers in providing support and encouragement.

It is worth noting that the study has certain limitations, including its reliance on self-report measures, which may introduce bias, and the specific age range of the participants because it narrows the applicability of the study's findings to a specific age group, and the results may not be representative of self-concept development in individuals of all ages.

Future research should explore the long-term effects of social support on self-concept development and consider additional factors that may influence this relationship. Researchers could conduct comparative research across diverse cultural contexts to illuminate how cultural factors influence the interplay between social support and adolescent self-concept. By examining cultural variations, researchers can identify the unique dynamics at play and broaden our understanding of these relationships in a global context. Research could also focus on the role of social support within educational environments. Specifically, investigations can explore how various forms of support, including teacher support, peer relationships, and parental involvement, influence self-concept and academic achievement among adolescents. This research would shed light on the multifaceted interactions within educational settings and provide guidance for educators and policymakers on how to create supportive learning environments that nurture positive self-concept and academic success in students.

In conclusion, the results show that a combination of parent and peer support, along with their interaction, plays a significant role in shaping adolescent self-concept. Understanding these dynamics can inform interventions and strategies to enhance self-concept development in adolescents, ultimately contributing to their overall well-being.

References

1. Bailey J. A., 2nd (2003). Self-image, self-concept, and self-identity revisited. Journal of the National Medical Association, 95(5), 383–386.
2. Crocetti, E., Albarello, F., Meeus, W., & Rubini, M. (2023). Identities: A developmental social-psychological perspective. European Review of Social Psychology, 34(1), 161-201. https://doi.org/10.1080/10463283.2022.2104987
3. Denche-Zamorano, A., Mayordomo-Pinilla, N., Galán-Arroyo, C., Mañanas-Iglesias, C., Adsuar, J. C., & Rojo-Ramos, J. (2023). Differences in Self-Concept and Its Dimensions in Students of the Third Cycle of Primary School, Obligatory Secondary Education, and Baccalaureate. Healthcare (Basel, Switzerland), 11(7), 987. https://doi.org/10.3390/healthcare11070987
4. Dudovitz, R. N., Chung, P. J., & Wong, M. D. (2017). Teachers and Coaches in Adolescent Social Networks Are Associated With Healthier Self-Concept and Decreased Substance Use. The Journal of School Health, 87(1), 12–20. https://doi.org/10.1111/josh.12462
5. Erikson, E. H. (1968). Identity: Youth and Crisis. Norton & Co.
6. Fernández-Zabala, Arantza, Ramos-Díaz, Estibaliz, Rodríguez-Fernández, Arantzazu, & Núñez, Juan. (2020). Sociometric Popularity, Perceived Peer Support, and Self-Concept in Adolescence. Frontiers in Psychology, 11. https://doi.org/10.3389/fpsyg.2020.594007
7. Fisher, P. A., & Skowron, E. A. (2017). Social-learning parenting intervention research in the era of translational neuroscience. Current Opinion in Psychology, 15, 168–173. https://doi.org/10.1016/j.copsyc.2017.02.017
8. Graf GH, Biroli P, Belsky DW. (2021). Critical Periods in Child Development and the Transition to Adulthood. JAMA Netw Open. 2021;4(1):e2033359. https://dio.org/10.1001/jamanetworkopen.2020.33359
9. Harris, K. M. (2013). The Add Health Study: Design and Accomplishments. Retrieved from https://addhealth.cpc.unc.edu/wp-content/uploads/docs/user_guides/DesignPaperWave_I-IV.pdf
10. Helsen M, Vollebergh W, & Meeus W (2000). Social support from parents and friends and emotional problems in adolescence. Journal of Youth and Adolescence, 29(3), 319–335. https://doi.org/10.1023/A:1005147708827
11. Hoferichter, F., Kulakow, S., & Hufenbach, M. C. (2021). Support From Parents, Peers, and Teachers Is Differently Associated With Middle School Students' Well-Being. Frontiers in Psychology, 12, 758226. https://doi.org/10.3389/fpsyg.2021.758226
12. Kearney-Cooke A. (1999). Gender differences and self-esteem. The Journal of Gender-Specific Medicine: JGSM, 2(3), 46–52.
13. Lanjekar, P. D., Joshi, S. H., Lanjekar, P. D., & Wagh, V. (2022). The Effect of Parenting and the Parent-Child Relationship on a Child's Cognitive Development: A Literature Review. Cureus, 14(10), e30574. https://doi.org/10.7759/cureus.30574
14. Liu, Q., Jiang, M., Li, S., & Yang, Y. (2021). Social support, resilience, and self-esteem protect against common mental health problems in early adolescence: A nonrecursive analysis from a two-year longitudinal study. Medicine, 100(4), e24334. https://doi.org/10.1097/MD.0000000000024334

15. Mulvey, L. K., Boswell, C., & Zheng, J. (2017). Causes and Consequences of Social Exclusion and Peer Rejection Among Children and Adolescents. Report on Emotional & Behavioral Disorders in Youth, 17(3), 71–75.

16. MacQueen, G., Santaguida, P., Keshavarz, H., Jaworska, N., Levine, M., Beyene, J., & Raina, P. (2017). Systematic Review of Clinical Practice Guidelines for Failed Antidepressant Treatment Response in Major Depressive Disorder, Dysthymia, and Subthreshold Depression in Adults. Canadian Journal of Psychiatry. Revue Canadienne de Psychiatrie, 62(1), 11–23. https://doi.org/10.1177/0706743716664885

17. Mona Ayoub, Bo Zhang, Richard Göllner, Olivia E. Atherton, Ulrich Trautwein, Brent W. Roberts. (2021). Longitudinal Associations Between Parenting and Child Big Five Personality Traits. Collabra: Psychology, 7(1), 29766. https://doi.org/10.1525/collabra.29766

18. Ozbay, F., Johnson, D. C., Dimoulas, E., Morgan, C. A., Charney, D., & Southwick, S. (2007). Social support and resilience to stress: from neurobiology to clinical practice. Psychiatry (Edgmont (Pa. : Township)), 4(5), 35–40.

19. Pfeifer, J. H., & Berkman, E. T. (2018). The development of self and identity in adolescence: Neural evidence and implications for a value-based choice perspective on motivated behavior. Child Development Perspectives, 12(3), 158–164. https://doi.org/10.1111/cdep.12279

20. Ryszewska-Łabędzka, D., Tobis, S., Kropińska, S., Wieczorowska-Tobis, K., & Talarska, D. (2022). The Association of Self-Esteem with the Level of Independent Functioning and the Primary Demographic Factors in Persons over 60 Years of Age. International journal of environmental research and public health, 19(4), 1996. https://doi.org/10.3390/ijerph19041996

21. Sanvictores, T., & Mendez, M. D. (2022). Types of Parenting Styles and Effects On Children. In StatPearls. StatPearls Publishing.

22. Schlegel, R. J., Hicks, J. A., Arndt, J., & King, L. A. (2009). Thine own self: true self-concept accessibility and meaning in life. Journal of Personality and Social Psychology, 96(2), 473–490. https://doi.org/10.1037/a0014060

23. Vijayakumar, N., & Pfeifer, J. H. (2020). Self-disclosure during adolescence: exploring the means, targets, and types of personal exchanges. Current Opinion in Psychology, 31, 135–140. https://doi.org/10.1016/j.copsyc.2019.08.005