



The Influence of Personality and Social Support on Adolescent Sports Motivation

Fanisa Nurul Widhi¹✉, Yudha Munajat Saputra²✉, Nurlan Kusmaedi³✉

Departement of Sport Science, Faculty of Sport and Health Education, Universitas Pendidikan Indonesia, Indonesia¹²³

Article History

Received October 2025
Accepted October 2025
Published Vol.14 No.(3) 2025

Keywords:

Personality; Social Support; Sports Motivation; Adolescent

Abstract

This study's aim was to investigate the factors social support and personality contribute to the motivation of adolescent sportsmen. The research method used is quantitative, with descriptive correlative type. Subject of the study is 121 students of Junior high school 1 Lengkong, Sukabumi Regency. The measurements were composed of the Dark Triad Dirty Dozen (DTDD) for personality, the Multidimensional Scale of Perceived Social Support (MSPSS) for social support, and the Behavioral Regulation in Exercise Questionnaire (BREQ-3) for exercise motivation. Data were analyzed using the Spearman and multiple linear regression analysis. It was found that social support and personality significantly contribute to the exercise motivation ($t = 7.667$; $p = 0.000$ and $t = 2.512$; $p = 0.013$ respectively) and concurrently both play meaningful roles on the exercise motivation ($F = 31.454$; $p = 0.000$). The value of R^2 is 0.348; that is, 34.8% of variation between adolescents' sports motivation was explained by the personality and social support variables, while the other remaining 65.2% could be attributed to other factors. Thus it can also be suggested that in enhancing sports motivation during adolescence, social support is more important than personality.

How to Cite

Widhi, F., N., Saputra, Y. M., & Kusmaedi, N. (2025). The Influence of Personality and Social Support on Adolescent Sports Motivation. *Journal of Physical Education, Sport, Health and Recreation*, 14 (3), 1089-1095.

© 2025 Universitas Negeri Semarang

✉ Correspondence address :

E-mail: fanisanurulwidhi29@upi.edu; yudhamsaputra@upi.edu ; nurlankusmaedi@upi.edu

INTRODUCTION

The involvement in sports activity during adolescence is essential for the growth and development of health (Siti Zakiatul Balqis et al. 2024). Sports not only enhanced physical health but also increased discipline, unity (teamwork) and thus emotional control (Karim and Hambali 2024). Against the background of technological development and changing habits into modern lifestyles, adolescent sports participation has tended to decline in numerous countries, including Indonesia (Hanifah, Nasrulloh, and Sufyan 2023). This is a serious problem as habitual physical activity in adolescence has strong effects on adult health and lifestyle (Andriyani et al. 2020).

One of the factors that contribute to person motivation in getting involve or engage in sport, specially Adolescents Junior high school is motivation (Kurniawan et al. 2022). According to the Self-Determination Theory (Ryan & Deci, 2000), motive is affected by external variables (social support) and internal variables (interest and personality) as well as context (Tang et al. 2025). Personal characteristics and school social environment have the stronger influence on promotion of sport activities' during adolescence (Lin et al. 2023).

Personality is one factor of motivation in the intrinsic influence (Shang and Yang 2021). Also, previous work has also identified three personality traits that are known as the Dark Triad: narcissism, Machiavellianism and psychopathy in terms of high ambition, manipulateness and lack of empathy (Bryan et al. 2023). These characteristics can be expressed as adolescents of early ages desire some form of peer recognition, competition and for achieving personal goals following some route (González-García, Martinent, and Nicolas 2022). Otherwise, such traits might also trigger negative consequences like social conflict or emotional burden (Ulukan and Ersoy 2021).

Apart from the personality-related factors, social support is found to play an important role in adolescents' motivation for exercise (Akines et al. 2025). Students' self-confidence, enthusiasm, and enjoyment can be enhanced by the support of teachers, peers, and parents to participate in physical activity (Haneta, Fitri, and Williyanto 2023). In specific to a collectivist culture, such as in Indonesia, social support is very important because caring for itself plays an important role in determening the learning process and behaviour (Andriyani et al. 2020).

Previous studies have demonstrated that

these two factors are the most important in terms of determining motivation level, but they were studied mainly in athletes and college students (Q. Yang et al. 2025). There are few researches focusing on the association of personality, social support and exercise motivation in typical adolescents. This is despite the fact that adolescence is an important period for shaping motivation and interest toward PA (Cach and Carrasco-venturelli 2023). According to this, the main purpose of this study was to investigate the role of social support and personality in exercise motivation among adolescents and clarify the role that they play in fostering adolescent exercise motivation.

METHODS

Because the data collected for this study were numerical and analyzed statistically, a quantitative approach was used. This method analyzes the relationships between objectively measurable factors (Lopes 2024). This method was chosen because it allows researchers to observe relationships between variables without the need for manipulation or experimental treatment.

This study used a descriptive correlational technique. This approach aims to describe and analyze the relationship between personality variables and social support with exercise motivation in adolescents. This study statistically examined the influence through an analysis of the relationships between variables that already existed naturally in the respondents. This method was chosen because the researchers did not provide an experimental treatment but rather sought to understand the relationships between variables that naturally occur in early adolescence.

This research design used a non-experimental approach with a correlational approach. Researchers collected data as is to determine the extent of the relationship between the independent variables (personality and social support) and the dependent variable (exercise motivation) (Ibáñez et al. 2023). This design did not involve experimental manipulation, but instead investigated naturally occurring relationships between variables. Data analysis was performed using Spearman correlation to examine the relationships between variables and multiple regression to determine the contribution and simultaneous influence of variables on exercise motivation (Wang 2025).

The population in this study was 121 students at Junior high school 1 Lengkong, Sukabumi Regency, aged 13-17, who regularly attend physical education classes. Therefore, the term

"adolescent" in this study refers to early adolescents who are still junior high school students. Purposive sampling, which selects the sample based on predetermined standards by the researcher, was the sampling technique used.

Three questionnaires that have been proven to be valid were adopted in this study. Dark Triad dark triad traits were assessed with the Dark Triad Dirty Dozen (DTDD) by Jonason & Webster (2010), which is a 12-item scale representing narcissism, Machiavellianism, and psychopathy. The Chinese SMSPRE form uses a 5-point Likert scale and has good construct validity and reliability.¹⁰ The Cronbach's alpha coefficient ranged from 0.74 to 0.85 (mean $\alpha = 0.83$) across three substudies (Fathirezaie et al. 2024). Social support was assessed using the Multidimensional Perceived Social Support Scale (MSPSS) Sport adaptation (Alexe et al. 2021). This measure includes three sources of social support (i.e., parents, teachers/coaches, peers), with three items for each source. Participants responded on a 5-point Likert scale. The reliability of the instrument was assessed by Cronbach's alpha, where $\alpha = 0.85-0.88$ for each subscale, and $\alpha = 0.90$ overall. Criterion validity was established by convergent and divergent validation, construct validity was checked using S-P correlation analysis in which all the items have shown their correlation values > 0.30 and hence are valid on the basis of this. Both groups completed the Behavioral Regulation in Exercise Questionnaire version 3 (BREQ-3), a self-report, 24-item scale of six dimensions of motivation: amotivation, external, introjected, identified, integrated and intrinsic regulation. This questionnaire applies a 5-point Likert scale and has shown acceptable validity and reliability, with a total Cronbach's alpha of 0.91 and ICC = 0.913 (Pastor-Cisneros et al. 2025). Modification of the all instruments for the target population was made in such a way to simplify language to facilitate comprehension but without modifying original items' meaning.

Questionnaires were used to data collection for this research where the instrument was distributed directly to respondents at the research site. The scientists also stressed the need to be honest and factual in explaining the purpose of the study and how the questionnaire would work to subjects. Student participation was optional, and all information was anonymous following ethical considerations.

Descriptive analysis, Spearman correlation, and multiple regression using z-scores were among the quantitative statistical techniques used. Respondent characteristics, including the

number of participants, minimum and maximum scores, and mean scores, were described using descriptive analysis. Multiple regression analysis was used to investigate the contributions and concurrent effects of personality and social support on exercise motivation, while Spearman correlation analysis was used to determine the relationships between variables (Jiang et al. 2025). All analyses were conducted using IBM SPSS version 22.

RESULTS AND DISCUSSION

Table 2. Descriptive Analysis Results

	N	Min	Max	Mean	Std. Deviation
Personality	121	17	43	30.37	5.742
Social Support	121	22	45	35.29	4.464
Motivation	121	58	103	79.99	8.810
Valid N (listwise)	121				

Table 1. Shows the statistical descriptions used in this study among 121 participants. Participants generally have a fairly good level of personality, as seen from the minimum value of the personality variable of 17 to a maximum value of 43, an average of 30.37, and a standard deviation of 5.742. Participants receive strong support from their environment, as seen from the social support variable, which has a minimum value of 22 and a maximum value of 45, with an average of 35.29 and a standard deviation of 4.464. With a minimum value of 58 and a maximum value of 103, and an average of 79.99 and a standard deviation of 8.810, the motivation variable shows that most participants are highly motivated to exercise and achieve their goals.

Based on the results of the correlation analysis shown in Table 2, adolescent motivation in sports, personality, and social support were all examined. There was no significant relationship between personality and social support, as indicated by the correlation coefficient $r = -0.097$ and a significance value of $p = 0.290$ ($p > 0.05$). In addition, there was no significant relationship between motivation and personality, as indicated by the correlation value $r = 0.140$ and a significance value of $p = 0.125$ ($p > 0.05$). This indicates that social support and physical motivation are not directly influenced by personality. In contrast, there is a positive and significant relationship between social support and motivation, as indicated by the correlation coefficient $r = 0.534$ and a significance value of 0.000 ($p < 0.05$). Adolescents will

be more motivated to exercise and succeed if they receive greater social support.

Based on the results of the multiple regression test, the R value obtained = 0.059 indicates a fairly strong relationship between personality variables and social support on exercise motivation. The R Square value of .348, which means that the regression model consisting of personality and social support is able to explain 34.8%, the remaining 65.2% is explained by other factors outside this model. Meanwhile, the Adjusted R Square value of .337 indicates the adjustment of R Square to the number of variables and sample used. This means that after adjustment, approximately 33.7% of the variation in exercise motivation can still be explained by the two independent variables. This value is used to estimate how well the model will perform when used on a wider population. The Standard Error of the Estimate value of .814 indicates the average magnitude of the prediction error for exercise motivation in the same units as the variables. The smaller the value, the better the model is at predicting the dependent variable.

The calculated F value is 31.454 and the significance value for the influence of personality and social support on exercise motivation is $p = .000$ ($p < 0.05$) indicating that the regression model is simultaneously significant, meaning that the personality and social support variables together have a significant influence on exercise motivation.

The results of multiple linear regression analysis, it is known that the significant value for the influence of personality on sports motivation is $p = .013$ ($p < 0.05$) and the calculated t value is $2.512 > 1.980$, so it can be concluded that personality has a significant effect on sports motivation. The effect of social support on sports motivation has a significant value of $p = .000$ ($p < 0.05$) and with a calculated t value of $7.667 > 1.980$, so it can be concluded that social support has a significant effect on sports motivation.

The results of this study suggest that both personality and social support play a role in adolescents' intention to engage in physical activity. These findings agree with prior work (Aguilar-parra and Cangas 2019), pointing out that the social context impacts motivation towards PA beyond the individual traits, such as personality or intrinsic motivation to do physical exercise. For instance, social support from family and friends is responsible of maintain adolescents' involvement in sports activities (Klatt et al. 2021). In addition, Ryan and Deci (2000) stress, from the per-

spective of Self-Determination theory that "need for social relatedness is underlying motivator for intrinsic motivation" (Cano and Gomez-baya 2025). Moreover, higher-order personality traits such as the dimensions of DT (Machiavellianism, Narcissism, and Psychopathy) also shape how individuals react to challenges and rewards in sport context (Ermis et al. 2024). Consequently, findings from this study reinforce the notion that sports motivations of young athletes are formed through a reciprocal mixture of personality and social influences on sports behaviour.

In descriptive terms, participants scored fairly high on personality, social support and motivation for exercise. Positive personality is manifest as characteristic of taking responsibility, perseverance and emotional stability, which can put forward for individuals to keep exercise discipline and continuity (Zhang and Chen 2024). These findings correspond to studies (Karamitrou et al. 2024) who demonstrated that personality factors, and in particular conscientiousness and emotional stability, are predictors of sports commitment and performance. adaptive personality in adolescents benefits individuals to cope with social pressures and competition demands, which increase the internal motivation of continuing playing sports (Peng, Chen, and Wang 2025).

Second, because participants reported very high levels of social support, it is clear that parents and coaches/teachers, as well as peers play an important role in providing both emotional and instrumental help. Such support could act as a form of extrinsic motivation that enhances self-efficacy and the levels of involvement within sports, an argument similar to that made by (Freeman, Coffee, and Rees 2011). This is consistent with Deci and Ryan's (2000) Self-Determination Theory, which highlights the significance of social relatedness need in cultivating intrinsic motivation. Consequently, the relatively high levels of positive youth character strengths and social support reported in this study typify a psychological state from which sustainable sports motivation can evolve (J. Yang et al. 2024).

The results of the correlation test showed that personality and motivation or social support were not correlated strongly. This result suggests that specific personality traits are not directly related to the amount of social support and motivation on exercising given (Edler et al. 2022). Within the adolescent population, personality might act indirectly via mediating constructs like social experiences, communication styles or how the sport environment is perceived (Tang et al. 2025). Robust personality rather than the so-

cial one of sport on which they build attitudes and intentions as suggested by Roberts, Treasure and Conroy (2007), “ The influence of social context on motivation for elite youth-athletes has been proposed to be greater than that related to stable aspects in personality” (Deliligka and Bekiari 2018). It can thus be suggested that the power of the social context is stronger than relatively stable individual traits in sports with adolescent players.

On the other hand, physical activity motivation is positively and significantly associated with social support, where more social support from parents, peers and coaches are perceived by the adolescents; they will be more motivated to participate in sports. This result supports the self-determination theory (Deci & Ryan, 2012), which postulates that social support is important for the fulfillment of basic psychological needs, such as autonomy and relatedness, and leads to increased intrinsic motivation. These findings were in support of those noted by Freeman et al. (2011) and Pelletier et al. (2013), which proves that perceived social support increases motivation and satisfaction in sports practising (Li et al. 2014a). Hence, the power of social support seems to be stronger than personality in shaping exercise motivation for adolescents.

The findings of the regression analysis indicate that personality and social support are significant predictors for sports motivation among adolescents. This result demonstrates the importance of both in forming an individual's internal self-motivation to engage in physical activities. (Aguilar-parra and Cangas 2019). Personality can play a role in this as well, with those having good personality traits (discipline, resilience and optimism) able to keep commitment easier and perform more consistently towards goals sports wise. This is consistent with the results of Allen et al. (2013) as well as Judge & Ilies (2002), converge on consistent finding that personality traits, such as conscientiousness and emotional stability are positively related to achievement motivation and high performance (Lado and Alonso 2017). In the case of youth sport, personality could be a psychological resource to face competitive pressure, failures and intensive training (González-Hernández et al. 2020). Accordingly, positive personality traits can be taken as the internal support that reinforces intrinsic motivation for execution and sporting success (Q. Yang et al. 2025).

Finally, it has been showed that sports motivation is more influenced by social support rather than personality. This indicates that the extrinsic motivational environment (e.g., social in-

teractions with coaches/teachers, peers, and family) is very important to generate motivation and persistence in adolescents (Li et al. 2014b). These results are consistent with Self-Determination Theory (Mack et al. 2011; Ryan and Deci 2000), which rests on the notion that satisfying basic psychological needs for relatedness, autonomy, and competence is crucial to promoting intrinsic motivation. Social support can increase perceptions of acceptance, support, and empathy which could lead to increased levels of commitment towards sports participation. In a study on barista (Freeman, Coffee, and Rees 2011) researchers have furthermore backup this view proving that an external strong social support correlates with more motivation and psychological resilience in athletes. Hence, the mediational role of social environment plays a pivotal role in enhancing intrinsic motivation to succeed in youth sports.

The R^2 value of 0.348 demonstrates that social support and personality account for 34.8% of the variance in exercise motivation, with some other variables not addressed here accounting for the residual variation (65.2%). These variables can be such factors as the coach's leadership style, competitive experience, fitness level, personal goal orientation and finally motivational climate in the team. This is also consistent with Valle-rand's (2007) Hierarchical Model of Intrinsic and Extrinsic Motivation, explaining that among exercise motivation personal as well as different social contexts interact (Angot and Martinent 2025). Thus, additional work is warranted to should better elucidate these variables in the context of adolescent exercise motivation.

These results provide evidence for the dominant role of social support in enhancing adolescent sports motivation and indicate that personality is an internal factor serving as one type of resilience quality that influences commitment to sport. The applied implications of these results emphasise the role of coaches and trainers, as well as parents, in establishing an open and supportive environment focused on improving human relations. This type of atmosphere has potential not only to enhance the source of motivation, but also a positive character development and long-term sports success. That is, to youth sports development, winning the competition (and individual technical skill) is not every matter, but also with enthusiasm of sports and sense of value in sports under social support.

CONCLUSION

The findings suggest social support and personality contribute 34.8% to the motivation

of adolescents in exercising among the adolescents. People who possess such good personal characteristics as self discipline and inner strength have less craving to play extremal sport. Nevertheless, the effect of social support was stronger than that of personality traits such that parents, teachers and friends are indispensable to cultivate children's excitement and motivation for sports. Thus, interventions regarding encouragement of exercise motivation in adolescence should be conducted by reinforcing an encouraging social atmosphere and fostering positive character from childhood.

REFERENCES

- Aguilar-parra, Jos M, and Adolfo J Cangas. 2019. "The Influence of the Social Context on Motivation towards the Practice of Physical Activity and the Intention to Be Physically Active."
- Akines, Sarah Alhariza, Ayu Riesky, Luh Marchintya, Orientini Putri, I Gede Pasek, and Wira Bhuanana. 2025. "Family and Coach Support on Motivation and Performance in Adolescent Athletes : A Systematic Review." 13(3): 575–79.
- Alexe, Dan Iulian, Anișoara Sandovici, Viorel Robu, Rafael Burgueño, Dragoș Ioan Tohănean, Alin Cornel Larion, and Cristina Ioana Alexe. 2021. "Measuring Perceived Social Support in Elite Athletes: Psychometric Properties of the Romanian Version of the Multidimensional Scale of Perceived Social Support." *Perceptual and Motor Skills* 128(3): 1197–1214. doi:10.1177/00315125211005235.
- Andriyani, Fitria D., Stuart J.H. Biddle, Novita I. Arovah, and Katrien de Cocker. 2020. "Physical Activity and Sedentary Behavior Research in Indonesian Youth: A Scoping Review." *International Journal of Environmental Research and Public Health* 17(20): 1–15. doi:10.3390/ijerph17207665.
- Angot, Christophe, and Guillaume Martinent. 2025. "Effect of Contextual Motivation in Sports on the Evolution of Situational Intrinsic Motivation."
- Bryan, William, Tracy C. Donachie, Robert S. Vaughan, and Daniel J. Madigan. 2023. "Don't Look Back in Anger: A Cross-Sectional and Dyadic Examination of the Dark Triad, Anger, and Aggression in Athletes." *Psychology of Sport and Exercise* 64(March 2021): 102305. doi:10.1016/j.psychsport.2022.102305.
- Cach, Javier, and Hanriette Carrasco-venturelli. 2023. "Motivation toward Physical Activity and Healthy Habits of Adolescents : A Systematic Review." : 1–17.
- Cano, Daniel Barbosa, and Diego Gomez-baya. 2025. "Self-Determination Theory-Based Interventions to Promote Physical Activity and Sport in Adolescents : A Scoping Review."
- Deliligka, Stergiani, and Alexandra Bekiari. 2018. "Multi-Parametric Analysis of Aggressive Communication and Motivation Climate in Physical Education." : 179–203. doi:10.4236/psych.2018.92012.
- Edler, Johanna Sophie, Kristin Manz, Natalia Rojas Perilla, Harald Baumeister, and Caroline Cohrdes. 2022. "The Role of Personality Traits and Social Support in Relations of Health-Related Behaviours and Depressive Symptoms." *BMC Psychiatry*: 1–15. doi:10.1186/s12888-022-03693-w.
- Ermis, Sermin Agrali, Ayse Hazal Boyanmis, Cenk Temel, and Yesim Karac Ocal. 2024. "Exploring the Influence of Dark Triad and Light Triad Traits On."
- Fathirezaie, Zahra, Georgian Badicu, Fatma Hilal Yagin, Mohamadtaghi Aghdasi, Seyed Hojjat Zamani Sani, Kosar Abbaspour, Özgür Mülazımoğlu Ballı, Sara Entezar, and Luca Paolo Ardigo. 2024. "Personality and Motivation of Physical Activity in Adolescent Girls: Effects of Perceived Parental Support and Social Physical Anxiety." *BMC Public Health* 24(1): 1–9. doi:10.1186/s12889-024-18060-5.
- Freeman, Paul, Pete Coffee, and Tim Rees. 2011. "The PASS-Q : The Perceived Available Support in Sport Questionnaire." : 54–74.
- González-García, Higinio, Guillaume Martinent, and Michel Nicolas. 2022. "Relationships between Coach's Leadership, Group Cohesion, Affective States, Sport Satisfaction and Goal Attainment in Competitive Settings." *International Journal of Sports Science and Coaching* 17(2): 244–53. doi:10.1177/17479541211053229.
- González-Hernández, Juan, Ricardo Cuevas-Campos, María Isabel Tovar-Gálvez, and Lucía Melguizo-Rodríguez. 2020. "Why Negative or Positive, If It Makes Me Win? Dark Personality in Spanish Competitive Athletes." *International Journal of Environmental Research and Public Health* 17(10). doi:10.3390/ijerph17103504.
- Haneta, Chikola, Mustika Fitri, and Septian Willianto. 2023. "Impact Of Social Support On Increasing Motivation Of Student Athlete Performance." *Bravo's : Jurnal Program Studi Pendidikan Jasmani dan Kesehatan* 11(3): 259. doi:10.32682/bravos.v1i3.3218.
- Hanifah, Laily, Nanang Nasrulloh, and Dian Luthfiana Sufyan. 2023. "Sedentary Behavior and Lack of Physical Activity among Children in Indonesia." *Children* 10(8). doi:10.3390/children10081283.
- Ibáñez, E Melguizo, F Zurita Ortega, J L Ubago Jiménez, C J López Gutiérrez, and G González Valero. 2023. "An Explanatory Model of the Relationships between Sport Motivation , Anxiety and Physical and Social Self - Concept in Educational Sciences Students." *Current Psychology* 42(18): 15237–47. doi:10.1007/s12144-022-02778-9.
- Jiang, Zhili, Hanyu Li, Luyao Yu, Yudi Yu, Tian Zheng, and Lihua Huang. 2025. "The Relationship between Dyspnea- Related Kinesiophobia and Physical Activity in People with COPD : A Moderated Mediation Model." : 1–11.

- Karamitrou, Aristeia, Nikos Comoutos, Evangelos Brisimis, Alexander T Latinjak, Antonis Hatzigeorgiadis, Yannis Theodorakis, Georgios Loules, Yannis Tzioumakis, and Charalampos Krommidas. 2024. "The Role of Big Five Personality Traits , Basic Psychological Need Satisfaction , and Need Frustration in Predicting Athletes ' Organic Self-Talk."
- Karim, Naufal Nur Fadhillah Karim, and Burhan Hambali Hambali. 2024. "Meningkatkan Kesehatan Mental Melalui Olahraga: Sebuah Penelitian Systematic Literature Review." *SPRINTER: Jurnal Ilmu Olahraga* 5(2): 247–57. doi:10.46838/spr.v5i2.519.
- Klatt, Stefanie, Lisa Marie Rückel, Sebastian Wagener, and Benjamin Noël. 2021. "Personality Traits and Emotion Regulation Styles of Elite Beach Volleyball Dyads: Examination of Intra-Team Differences, Performance and Satisfaction Levels." *Frontiers in Psychology* 12(October). doi:10.3389/fpsyg.2021.719572.
- Kurniawan, Rama, Febrita Paulina Heynoek, Fajar Raya, and Ferdinal Kusuma. 2022. "Original Article Motivation in Physical Education for Junior High School Students : A Gender Perspective." 22(12): 3072–79. doi:10.7752/jpes.2022.12389.
- Lado, Mario, and Pamela Alonso. 2017. "Journal of Work and Organizational Psychology A Quantitative Synthesis." 33: 175–82.
- Li, Kaigang, Ronald J Iannotti, Denise L Haynie, Jessamyn G Perlus, and Bruce G Simons-morton. 2014a. "Motivation and Planning as Mediators of the Relation between Social Support and Physical Activity among U . S . Adolescents : A Nationally Representative Study." : 1–9.
- Li, Kaigang, Ronald J Iannotti, Denise L Haynie, Jessamyn G Perlus, and Bruce G Simons-morton. 2014b. "Motivation and Planning as Mediators of the Relation between Social Support and Physical Activity among U . S . Adolescents : A Nationally Representative Study." *International Journal of Behavioral Nutrition and Physical Activity* 11(1): 1–9. doi:10.1186/1479-5868-11-42.
- Lin, Hao, Haidong Chen, Qingzao Liu, Jie Xu, and Shan Li. 2023. "A Meta-Analysis of the Relationship between Social Support and Physical Activity in Adolescents: The Mediating Role of Self-Efficacy." *Frontiers in Psychology* 14(January): 1–14. doi:10.3389/fpsyg.2023.1305425.
- Lopes, Helder. 2024. "The Effect of Motivation on Physical Activity among Middle and High School Students." : 1–14.
- Mack, Diane E., Philip M. Wilson, Kristin G. Oster, Kent C. Kowalski, Peter R.E. Crocker, and Benjamin D. Sylvester. 2011. "Well-Being in Volleyball Players: Examining the Contributions of Independent and Balanced Psychological Need Satisfaction." *Psychology of Sport and Exercise* 12(5): 533–39. doi:10.1016/j.psychsport.2011.05.006.
- Pastor-Cisneros, Raquel, Jorge Carlos-Vivas, José Francisco López-Gil, and María Mendoza-Muñoz. 2025. "Cross-Cultural Adaptation and Validation of the Spanish Version of the Behavioral Regulation in Exercise Questionnaire for Children (BREQ-3C): Analysis of Psychometric Properties." *Healthcare (Switzerland)* 13(17): 1–14. doi:10.3390/healthcare13172197.
- Peng, Bo, Weisong Chen, and Hongshen Wang. 2025. "How Psychological Resilience Shapes Adolescents ' Sports Participation : The Mediating Effect of Exercise Motivation." (April): 1–14. doi:10.3389/fpsyg.2025.1546754.
- Ryan, Richard M., and Edward L. Deci. 2000. "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions." *Contemporary Educational Psychology* 25(1): 54–67. doi:10.1006/ceps.1999.1020.
- Shang, Yao, and Shi-yong Yang. 2021. "The Effect of Social Support on Athlete Burnout in Weightlifters : The Mediation Effect of Mental Toughness and Sports Motivation." 12(May): 1–12. doi:10.3389/fpsyg.2021.649677.
- Siti Zakiatul Balqis, Putri Nabila Indriani, Siti Zahra Aglia Irian, Desi Sri Rahayu, and Burhan Hambali. 2024. "Pengembangan Personal Melalui Pendidikan Jasmani: Peran Penting Dalam Pembentukan Kesehatan Mental Dan Fisik." *Jurnal Ilmiah Spirit* 24(2): 29–38. doi:10.36728/jis.v24i2.3576.
- Tang, Minghuan, Bo Peng, Weisong Chen, Yuxin Liu, Hongshen Wang, and Ting Yu. 2025. "The Mechanism of How Adolescents ' Physical Self-Esteem and Psychological Resilience Influence Sports Participation : The Chain Mediating Roles of Exercise Motivation and Social Support."
- Ulukan, Mahmut, and Adnan Ersoy. 2021. "Sporcularlarda İnsan Doğasının Kötü Yönü Karanlık Üçlü : Narsisizm Makyavelizm ve Psikopatinin İncelenmesi The Evil Side of Human Nature in Athletes the Dark Triad : An Examination of Narcissism , Machiavellianism and Psychopathy." 8(3): 356–73. doi:10.33468/sbsebd.240.
- Wang, Wenlei. 2025. "The Study of the Association between Exercise Motivation and Cardiorespiratory Fitness in Young Students : A Systematic Review And." (March). doi:10.3389/fpsyg.2025.1566952.
- Yang, Ji-hye, Hye Jin Yang, Chulhwan Choi, and Chul-ho Bum. 2024. "Behavioral Sciences Relationship between Athletes ' Big Five Model of Personality and Athletic Performance : Meta-Analysis."
- Yang, Qishun, Mingliang Song, Min Li, and Xiao Chen. 2025. "The Influence of Personality Traits on College Students ' Exercise Behavior : A Chain Mediation Model of Exercise Self-Efficacy and Exercise Motivation."
- Zhang, Zhendong, and Yonghuan Chen. 2024. "Research on the Relations Among Personality Traits , Sports Commitment , and Exercise Behavior — A Case Study of Chinese College Students." (January): 665–78.