

Sigma's 30th International Nursing Research Congress

Adolescent Motivation for Physical Activity: A Concept Analysis

Karla A. Palmer, MSN, RN¹

Lorraine B. Robbins, PhD, RN, FAAN, FNP-BC¹

Jiying Ling, PhD, MS, RN¹

Vicki Voskuil, PhD, RN²

(1)College of Nursing, Michigan State University, East Lansing, MI, USA

(2)Nursing Department, Hope College, Holland, MI, USA

Purpose:

According to Healthy People 2020, adolescents need to meet current national physical activity (PA) guidelines for aerobic PA calling for 60 minutes or more per day of at least moderate-intensity PA. However, recent data from Youth Risk Behavior Surveys report 53.5% of U.S. high school adolescence were not achieving PA for at least 60 minutes on five of the last seven days before the survey. By the end of 2018, approximately 21% of healthcare costs in the U.S. will be directed toward treating obesity and obesity-related chronic health conditions, both of which can result from inadequate PA. Targeting various psychosocial factors related to the behavior, such as adolescents' motivation for PA, may be a necessary step toward increasing their PA.

Methods:

This presentation will provide an analysis of the concept of motivation related to adolescent PA using Rodger's evolutionary method of concept analysis. A total of 1852 articles were identified. Fifty-nine articles meeting inclusion criteria were included in the review. Data were reviewed for antecedents and consequences of motivation, as well as the attributes of the concept. PubMed, Cumulative Index of Nursing and Allied Health Literature (CINAHL), Educational Resources Information Center (ERIC), PsychInfo, and Sport Discus were searched for publications from 1980 – 2018. Search terms included motivation, adolescents or teenagers or young adults and physical activity or exercise or fitness or physical exercise.

Results:

Defining attributes of motivation for PA in adolescence include: 1) motivation is on a continuum 2) motivation is dynamic, 3) the social environment can have a positive or negative impact on an adolescent's motivation and 4) motivation can be different based on an individual's orientation. The different types of behavioral regulation for motivation on the continuum are: intrinsic, integrated, identified, introjected, external regulation and amotivation. Autonomous motivation includes the following related behavior: intrinsic, integrated and identified. Motivation is dynamic and can be reflective or automatic. Reflective motivation which is a process involving plans and evaluation, may be aligned with sustained autonomous motivation. Automatic motivation is a process involving emotions and impulses that arise from associative learning and/or innate dispositions (e.g. habits and routines) and may be important for initiating behavior.

Autonomous motivation may be enhanced when the environment is autonomy-supportive and supports the essential antecedents of autonomy, competence and relatedness. Autonomy-supportive environments can be developed by parents, physical education teachers, or other adults and peers. Autonomy is a feeling by adolescent that they have a choice in the PA behavior they can participate in. Competence is described as a feeling by adolescents that they can interact in the PA environment in a successful way (e.g. they have the essential skills) to achieve the desired and expected outcome. Relatedness involves adolescents seeking new identifies that support their own interest and feeling like they belong with others who share in those same interests.

Autonomous motivation may also be enhanced when the environment supports the contributing antecedents of PA self-efficacy, social support for PA, and motives (e.g. seeking achievement or appearance reasons). Self-efficacy for PA, which is defined as an adolescent's beliefs about his or her ability to participate in PA despite barriers, is a consistent predictor of PA and goes beyond competence. Social support for PA can be received from peers, parents and others and be in the form of emotional (encouragement) or instrumental (such as financial support for transportation, clothes or equipment for PA participation); social support extends beyond relatedness. Motives for PA are the reasons why adolescents choose to participate in PA and describe their goal for what they want to attain from PA participation. Studies have clustered motives into different categories: social, health, achievement, appearance, fitness, and interest/enjoyment and found that motives differ by sex and age. Motives associated with more intrinsic reasoning have been correlated with higher positive affect, satisfaction, enjoyment, vitality and effort of PA. The most frequently utilized measurement tool for motivation is the Behavioral Regulation in Exercise Questionnaire (BREQ-3). The items used to assess autonomous motivation focus on PA enjoyment, satisfaction, interest, and importance; and the degree that PA is perceived as being part of one's identity.

Adolescents also have individual differences that can determine their motivation. There are three different trait-like orientations around motivation: 1) Autonomy orientation: being able to control your own environment 2) Controlled Orientation: seeing the world as controlling them and 3) Impersonal Orientation: seeing themselves as incompetent. Adolescents have varying degrees of each of these orientations and these variations impact their motivation for different behaviors.

The consequence of increased autonomous motivation for PA is increased PA. Interventions that can increase autonomous motivation to improve PA such as in physical education need to enhance the three essential antecedents of: autonomy, competence and relatedness; and also, the contributing antecedents of PA self-efficacy (ability to overcome barriers to PA), social support (emotional or instrumental), and motives for PA.

Conclusion:

This concept analysis provided a definition of autonomous motivation for PA in adolescence. Autonomous motivation is a mental force or drive that is reflected by perceived enjoyment, satisfaction and importance of and interest in PA; and perceptions that PA is part of one's identity. Future researchers should be consistent in the use of motivation terms and clarify the type of motivation being researched. Autonomous motivation for PA in adolescence has been clarified through this concept analysis. This information may be helpful for promoting consistency across disciplines in defining and measuring the concept and increasing motivation for PA or other health-promotion behaviors of importance to nursing. Future research with adolescence is warranted to examine underlying reasons for the differences in motivation for PA that exist between males and females and by weight status and stage of development.

Increasing PA during adolescence is important for establishing continued adequate engagement in this behavior later in life. Maintaining a healthy lifestyle throughout life is important to prevent chronic conditions such as diabetes, heart disease and cancer. Leading a healthy lifestyle may also help adolescents with the development of positive relationships and contribute to emotional wellness and academic success. Adolescents who maintain healthy behaviors throughout life are more likely to make more long-term, positive contributions to society.

Title:

Adolescent Motivation for Physical Activity: A Concept Analysis

Keywords:

Concept Analysis, Motivation and Physical Activity

References:

- Aelterman, N., Vansteenkiste, M., Soenens, B., & Haerens, L. (2016). A dimensional and person-centered perspective on controlled reasons for non-participation in physical education. *Psychology of Sport and Exercise*, 23, 142-154. doi:10.1016/j.psychsport.2015.12.001
- De Meester, A. a. d. u. b., Cardon, G., De Bourdeaudhuij, I., & Haerens, L. (2017). Extracurricular school-based sports as a stepping stone toward an active lifestyle, differences in physical activity and sports-motivation between extracurricular school-based sports participants and non-participants. *Journal of Teaching in Physical Education*, 36(4), 485-497. doi:10.1123/jtpe.2016-0035
- Dishman, R. K., McIver, K. L., Dowda, M., & Pate, R. R. (2018). Declining physical activity and motivation from middle school to high school. *Medicine and Science Sports Exercise*. doi:10.1249/mss.0000000000001542
- Dishman, R. K., McIver, K. L., Dowda, M., Saunders, R. P., & Pate, R. R. (2015). Motivation and behavioral regulation of physical activity in middle school students. *Medicine and Science Sports Exercise*, 47(9), 1913-1921. doi:10.1249/mss.0000000000000616
- Fullmer, M. O., Wilkinson, C. c. w. b. e., Prusak, K. A., Eggett, D., & Pennington, T. (2018). Adolescent physical activity and motivational profiles while keeping a physical activity record. *Journal of Teaching in Physical Education*, 37(1), 1-11. doi:10.1123/jtpe.2017-0072
- Gillison, F., Standage, M., & Verplanken, B. (2014). A cluster randomised controlled trial of an intervention to promote healthy lifestyle habits to school leavers: study rationale, design, and methods. *BMC Public Health*, 14(1), 221-221. doi:10.1186/1471-2458-14-221
- Gillison, F. B., Standage, M., & Skevington, S. M. (2013). The effects of manipulating goal content and autonomy support climate on outcomes of a PE fitness class. *Psychology of Sport and Exercise*, 14(3), 342-352 doi:10.1016/j.psychsport.2012.11.011
- Horn, T.S., & Smith, A.L. (2018). *Advances in Sport and Exercise Psychology* (4th Edition). Human Kinetics: Champaign, IL.
- Kalman, M., Gecková, A. M., Hamřík, Z., Kopčáková, J., Iannotti, R. J., Veselská, Z. D., Kopáková, J. (2015). Motives for physical activity among adolescents in the Czech and Slovak Republics. *Central European Journal of Public Health*, 23, S78-S82.
- Kann L, McManus T, Harris WA, et al. Youth Risk Behavior Surveillance — United States, (2017). *Morbidity Mortality Weekly Report Surveillance Summer 2018*;67(No. SS-8):1–114. doi:10.15585/mmwr.ss6708a1
- Li, K., Iannotti, R. J., Haynie, D. L., Perlus, J. G., & Simons-Morton, B. G. (2014). 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 Physical Activity*, 11(1), 42. doi:10.1186/1479-5868-11-42
- Markland, D. & Tobin, V.J. (2010). Need support and behavioural regulations for exercise among exercise referral scheme clients: The mediating role of psychological need satisfaction. *Psychology of Sport and Exercise*, 11, 91-99

Nicaise, V., & Kahan, D. (2013). Psychological changes among Muslim students participating in a faith-based school physical activity program. *Research Quarterly for Exercise and Sport*, 84(4), 522-529. doi:10.1080/02701367.2013.839933

O'Loughlin, E. K., Sabiston, C. M., Dugas, E. N., & O'Loughlin, J. L. (2015). The association between exercise behavior regulation and exergaming in adolescents. *Journal of Physical Activity and Health*, 12(3), 328-334. doi: 10.1123/jpqh.2012-0455

Owen, K. B., Astell-Burt, T., & Lonsdale, C. (2013). The relationship between self-determined motivation and physical activity in adolescent boys. *Journal of Adolescent Health*, 53(3), 420-422. doi:10.1016/j.jadohealth.2013.05.007

President's Council on Fitness, Sports and Nutrition. Facts and Statistics (n.d.). 2017 Retrieved from: <https://www.hhs.gov/fitness/resource-center/facts-and-statistics/index.html>

Rogers B.L. (2000). Concept analysis: An evolutionary view. *Concept Development in Nursing: Foundations, Techniques and Applications*, 2nd edition (Rodgers, B.I. & Knafl K.A., eds), Saunders, Philadelphia, PA, pp. 77-102.

Ryan, R., & Deci, E. (2017). *Self-Determination theory. Basic psychological needs in motivation, development and wellness*. Guilford Press, New York, London.

Schneider, M. L., & Kwan, B. M. (2013). Psychological need satisfaction, intrinsic motivation and affective response to exercise in adolescents. *Psychology of Sport and Exercise*, 14(5), 776-785. doi:10.1016/j.psychsport.2013.04.005

Shen, B. (2014). Outside-school physical activity participation and motivation in physical education. *British Journal of Educational Psychology*, 84(1), 40-57. doi:10.1111/bjep.12004

Timo, J., Sami, Y.-P., Anthony, W., & Jarmo, L. (2016). Perceived physical competence towards physical activity, and motivation and enjoyment in physical education as longitudinal predictors of adolescents' self-reported physical activity. *Journal of Science and Medicine in Sport*, 19(9), 750-754.

Abstract Summary:

Motivation keeps adolescents progressing towards achievement of an outcome, such as attainment of regular and adequate physical activity (PA). For adolescents to develop a habit of engaging in PA research is needed to understand motivation. Conceptual clarity about motivation is lacking, but is needed to identify its importance.

Content Outline:

Introduction/Purpose

Healthy People 2020 objectives for adolescent PA and USDHHS PA guidelines. Youth Risk Behavior Surveys (2017) indicate majority of U.S high school adolescents are not achieving national recommendations for PA calling for 60 minutes of moderate-to-vigorous PA every day.

Methods

Analysis of the concept of adolescent motivation for PA using Rodger's Evolutionary Method.

Results

Defining attributes of motivation for PA: 1) being on a continuum 2) being dynamic, 3) being positively or negatively impacted by the social environment and 4) differing based on an adolescent's orientation.

1. The different types of behavior regulation for motivation on the continuum are: intrinsic, integrated, identified, introjected, and external regulation and amotivation.

a) Autonomous motivation which is purported to have a stronger relationship to behavior than introjected, external or amotivation includes: intrinsic (perceived enjoyment of, satisfaction with, or interest in PA); and integrated (perceptions that PA is part of adolescent's identify), and identified (perceptions by adolescent that PA is important or of value) regulation

b) Autonomous motivation can be reflective (process that involves reflection, planning and evaluation) or automatic (process involving emotions and impulses that arise from associative learning)

2. The social environment supports adolescent autonomy and is referred to as being autonomy-supportive.

a) Autonomous motivation is enhanced when the environment supports various antecedents

b) Autonomy-supportive environments can be developed by parents, physical education teachers, or other adults and peers.

3. Three essential antecedents, but there are also contributing antecedents.

a) Autonomy: feeling by adolescents that they have a choice regarding their PA.

b) Competence: feelings by adolescents that they have the skills to successfully engage in the behavior; can be increased through role modeling of PA by parents and other adults and peers.

c) Relatedness: feeling by adolescents that they belong in the group (sense of belonging).

d) Contributing antecedents for autonomous motivation: PA self-efficacy (ability to overcome barriers to PA), social support for PA and motives for PA.

4. Behavioral Regulation in Exercise Questionnaire (BREQ-3): items to assess autonomous motivation focus on PA enjoyment, satisfaction, interest, and importance; and the degree that PA is perceived as being part of one's identify.

5. Consequence of increased motivation is increased PA

a) Interventions that can increase autonomous motivation to improve PA such as in physical education need to enhance the three essential antecedents of: autonomy, competence and relatedness; and also, the contributing antecedents of PA self-efficacy (ability to overcome barriers to PA), social support (emotional or instrumental, and motives for PA).

Conclusion: The analysis provided a definition of motivation for PA in adolescence; future researchers should be consistent in the use of terms and clarify the type of motivation being researched. Autonomous motivation is a mental force or drive that is reflected by perceived enjoyment, satisfaction or importance of and interest in PA; and perceptions that PA is part of one's identity.

First Primary Presenting Author
Primary Presenting Author

Karla A. Palmer, MSN, RN
Michigan State University
College of Nursing
2nd year PhD Student, Instructor
East Lansing MI
USA

Author Summary: Mrs. Karla Palmer is a second year PhD Student with Michigan State University College of Nursing with a research focus of motivation related to adolescent physical activity. She is a 2018-2020 Jonas Scholar recipient. She has her MSN from Indiana Wesleyan University and has taught for Michigan State University College of Nursing for four years.

Second Author
Lorraine B. Robbins, PhD, RN, FAAN, FNP-BC

Michigan State University
College of Nursing
Assistant Professor
East Lansing MI
USA

Author Summary: Dr. Lorraine Robbins is Associate Professor at Michigan State University and has a research focus on adolescent girls' physical activity. She has numerous research articles and funding in this area. She is a Pediatric Nurse Practitioner.

Third Author
Jiying Ling, PhD, MS, RN
Michigan State University
College of Nursing
Assistant Professor
East Lansing MI
USA

Author Summary: Jiying Ling, an Assistant Professor from U.S. Michigan State University College of Nursing. She earned her PhD in Nursing in 2013. Her research focuses on health behavior promotion and obesity prevention among low-income families.

Fourth Author
Vicki Voskuil, PhD, RN
Hope College
Nursing Department
Assistant Professor
Holland MI
USA

Author Summary: Vicki received her Ph.D. in nursing from Michigan State University in 2016. She was a Jonas Nurse Scholar in the 2014-2016 cohort. She is Assistant Professor of Nursing at Hope College.