

Correlation Between Mental Health and Physical Activity Among Early Adolescents

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ABSTRACT

Background Early adolescent is a critical developmental period during which physical activity has a strong and positive correlation with mental health. During this stage adolescents experience rapid biological and psychological changes that can increase vulnerability to stress, anxiety and emotional disturbances. Studies show that physical activity have positive effect on mental wellbeing and some studies shows an inverse relation between physical activity and mental health. **Aim** The present study aims to determine the correlation between mental health and physical activity among adolescents. The objectives were to assess the mental health and physical activity level among adolescents, to determine the correlation between mental health and physical activity among adolescents, to find the association between mental health of adolescents and selected socio personal variables and to find the association between physical activity and selected socio personal variables. Theoretical framework adopted was Pender's health promotion model.

Methods: The research design was descriptive correlational. 198 adolescents took part in study. Socio personal data were collected using structured questionnaire, data regarding mental health were assessed by Strengths and difficulties questionnaire (SDQ 11-17) and physical activity was assessed by physical activity questionnaire –Adolescent (PAQ-A).

Results: The collected data were analysed using descriptive and inferential statistics. Poor mental health prevails at 43.9%, borderline in 31.8% and normal 24.2%. and Low physical activity dominates at 54.5%, moderate in 35.9%, and high in 9.6%. There was significant correlation between mental health and physical activity among Early adolescents ($r_s=0.424$). There is statistically significant association between mental health of adolescents and socio personal variables like age ($p < 0.001$), type of family ($p = 0.002$), income ($p = 0.064$), occupation of the father ($p = 0.006$), occupation of the mother ($p = 0.006$), Family dispute ($p < 0.001$), and Participant substance abuse exhibits perfect uniformity ($p = 0.003$), and There is statistically significant association between physical activity and socio personal variables like Age ($p < 0.001$), type of family ($p = 0.049$) family income ($p = 0.005$), occupation of the father ($p < 0.001$), occupation of the mother ($p < 0.001$), family dispute ($p = 0.013$), economic status ($p < 0.001$) and Participant substance abuse shows perfect uniformity ($p < 0.001$). **Conclusion** There was significant correlation between mental health and physical activity among Early adolescents.

Keywords: Mental health, physical activity, Early adolescents.

INTRODUCTION

Adolescence is a transitional time of growth and development between childhood and adulthood. WHO

defines 'adolescents' as individuals in the 10-19 year age group. This phase reflects maximum of physical, psychological, and behavioural change. This time is very crucial that they prepare for undertaking greater responsibilities. It is the time of worries, anxiety, conflicts and complexities.

Addiction to online games makes new generation satisfied with completing gaming levels. Satisfaction and happiness given by that seems to be replaced by happiness and relaxation that was previously given by field games and group plays, and other physical activity that this age group used to involve. If other means like online games, mobile phones etc replaces the psychological wellness given by physical activity, it can act as a barrier towards physical activity

A study conducted in Iceland to find the relationship of physical education, leisure time physical activity and psychological distress in adolescence show that school based physical activity enhances psychological wellbeing. The present study findings can be used to improve or modify physical activity so that it aids in good mental health and physical health of adolescents which ultimately ends up in complete wellbeing and a productive life .

OBJECTIVES

1. To assess the mental health among early adolescents of Government high schools in Aryancode panchayath.
2. To assess the physical activity among early adolescents of Government high schools in Aryancode panchayath.
3. To determine the correlation between mental health and physical activity among early adolescents.
4. To find the association between mental health of early adolescents and selected socio personal variables.
5. To find the association between physical activity of early adolescents and selected socio personal variables.

HYPOTHESES

- H1- There is significant correlation between mental health and physical activity among early adolescents.
- H2- There is significant association between mental health and socio personal variables of early adolescents.
- H3- There is significant association between physical activity and socio personal variables of early adolescents.

RESEARCH METHDOLOGY

In a view of nature of the problem selected and objectives to be accomplished a quantitative research approach is considered as an appropriate one for the present study

Research approach

Quantitative research approach was adopted for the present study

Research design

The research design adopted for this study is descriptive correlational design

Setting of the study

Study was conducted at government high schools at Aryancode panchayath.

Population

Adolescents of 12-14 years age group, studying in high schools of Aryancode panchayath.

Sample & sample size

198 Adolescents (12 years-14 years of age), studying in 7th standard to 9th standard of Government high schools of Aryancode panchayath during the period of data collection, and meets the sampling criteria

Sampling technique

In this study multistage cluster random sampling technique will be used to be draw the sample

SAMPLE CRITERIA

Inclusion criteria

- a. Adolescents (12 years-14years of age) studying in 7th to 9th standards of Government high schools of Aryancode panchayath.

Exclusion criteria

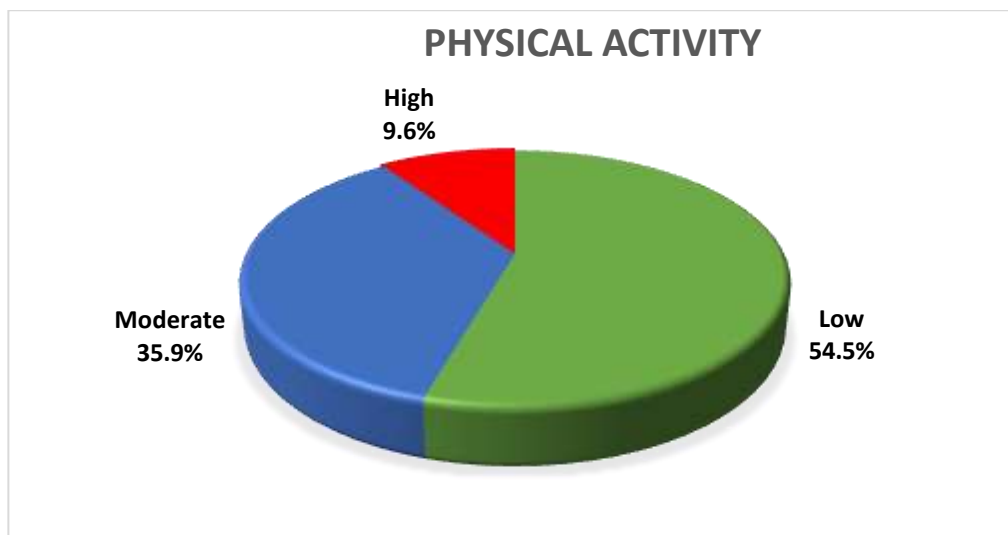
- a. Early adolescents who came across a grief in the last 3 months (grief include: death of loved ones, failure in main examinations, major illness of family members or the person himself) as reported by the class teacher.
- b. Early adolescents with handicap (Disability in mobility, vision, hearing and speech)
 - c. Early adolescent with recent history of mental health problems and is still under treatment. (drug or psychosocial therapies) as reported by the class teacher).
 - d. Early adolescents not willing to participate in study.

TOOLS AND TECHNIQUES

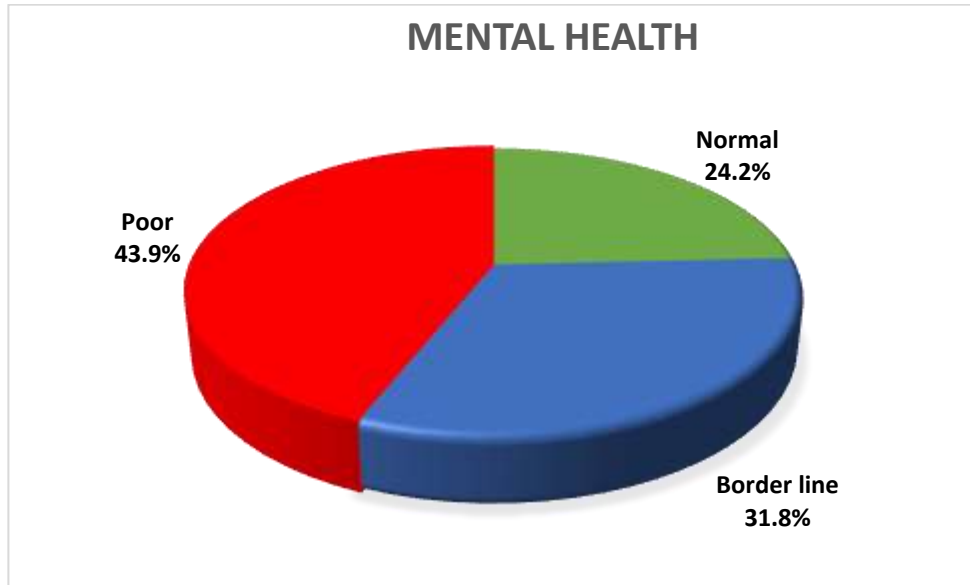
- **Tool 1:** Structured questionnaire to gather data regarding socio personal variables.
- **Technique:** self-report method
- **Tool 2:** Strengths and Difficulties Questionnaire (SDQ 11-17)
- **Technique:** Self report method
- **Tool 3:** Physical activity questionnaire (PAQ-A)

Technique: Self report method

RESULT



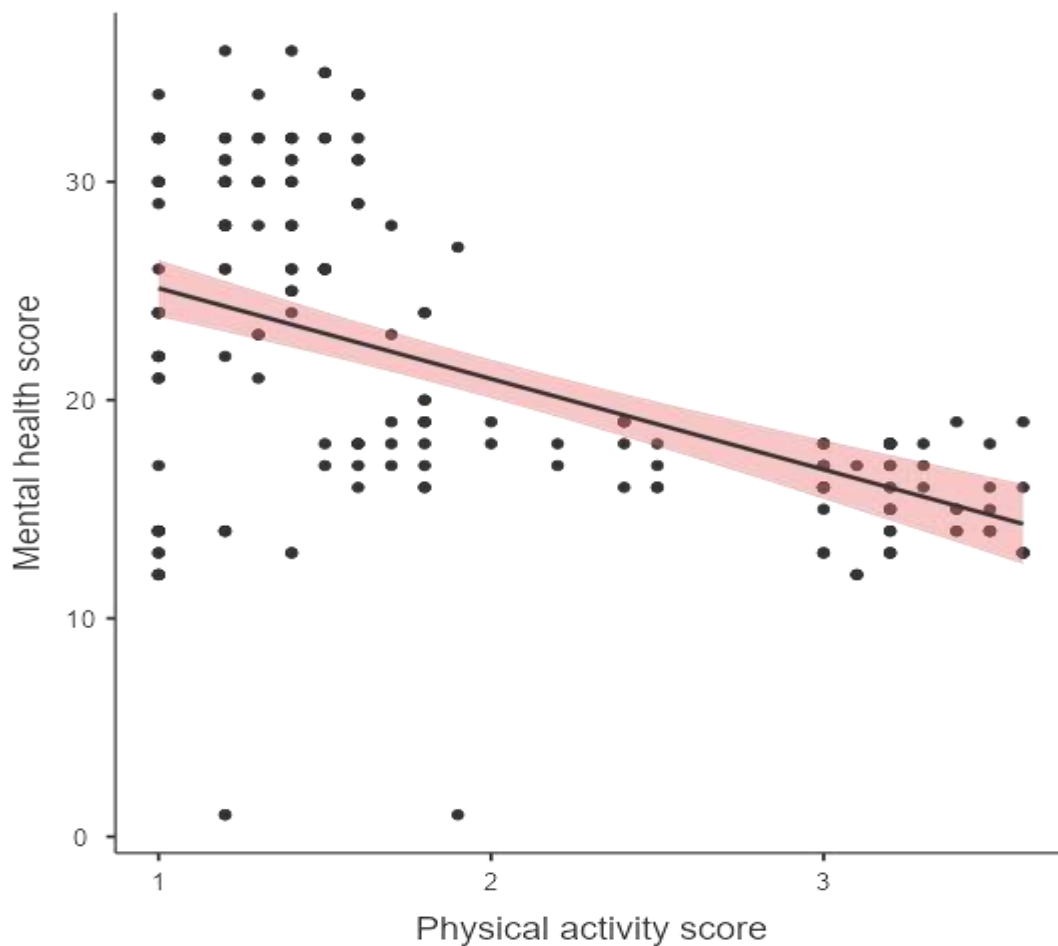
Low physical activity dominates at 54.5%, moderate in 35.9%, and high in 9.6%.



Poor mental health prevails at 43.9%, borderline in 31.8% and normal 24.2%.

Correlation between Physical activity score and mental health score

Scatter plot showing correlation between Physical activity score and mental health score



Poor mental health prevails at 43.9%, borderline in 31.8% and normal 24.2%. and Low physical activity dominates at 54.5%, moderate in 35.9%, and high in 9.6%. There is statistically significant association between mental health of adolescents and socio personal variables like age ($p < 0.001$), type of family ($p = 0.002$), income ($p = 0.064$), occupation of the father ($p = 0.006$), occupation of the mother ($p = 0.006$), Family dispute ($p < 0.001$), and Participant substance abuse exhibits perfect uniformity ($p = 0.003$), and There is statistically significant association between physical activity and socio personal variables like Age ($p < 0.001$), type of family ($p = 0.049$) family income ($p = 0.005$), occupation of the father ($p < 0.001$), occupation of the mother ($p < 0.001$), family dispute ($p = 0.013$), economic status ($p < 0.001$) and Participant substance abuse shows perfect uniformity ($p < 0.001$). This study result shows that there was significant correlation between mental health and physical activity among Early adolescents ($r_s = 0.424$).

DISCUSSION

This was a descriptive correlational study conducted to assess the correlation between mental health and physical activity among early adolescents. We explored mental health, physical activity as well as their association with selected socio personal variables.

Present study revealed that There was significant correlation between mental health and physical activity among adolescents. There is statistically significant association between mental health of adolescents and socio personal variables like age, type of family, income, occupation of the father, occupation of the mother, Family dispute, and Participant substance abuse exhibits perfect uniformity, and there is statistically significant association between physical activity and socio personal variables like Age, type of family, family income, occupation of the father, occupation of the mother, family dispute, economic status and Participant substance abuse shows perfect uniformity.

A Population based study was conducted in Iran to find the association between physical activity and mental health among 2584 high-school adolescents aged 15–19, using data from the mental health survey. The GHQ-28 (General Health Questionnaire) and IPAQ-short forms (International physical activity questionnaire) were used to evaluate the mental health and physical activity, respectively. It showed that adolescents with increased physical activity had marked decrease in mental health subscales except for depression⁵⁴, but the present study showed no correlation between mental health and physical activity ($r_s = 0.08$).

Study conducted to find the association between physical activity and mental well-being of Chinese adolescents showed that the physical activity level was significantly correlated with the adolescent's mental well-being ($r = 0.66$, $p < 0.001$)⁵⁷. But the present study finding is not supportive of it, as there is no significant correlation between mental health and physical activity ($r_s = 0.08$).

RECOMMENDATIONS

- Study findings recommend the need for improving physical education and training among school going adolescents.
- Study recommends periodic assessment on physical activity of adolescents by school health nurses or counsellors, to ensure physical and mental wellbeing.
- Study recommends periodic screening for mental health issues and counselling services in all schools, especially for students with previously identified mental health problems, which may help them for healthy transition to young adulthood.

- Study recommends modification of adolescent's behaviour through health education or awareness campaigns towards improving their knowledge and attitude to good physical activity, and it ultimately benefits in different domains in life.

LIMITATIONS

- Study was limited to selected schools of Aryancode panchayath only.
- Sample size was limited to 198, by considering the time limits .
- Generalization was limited due to small sample size.
- Possibility of participant's dishonesty and lack of seriousness in answering the questions.

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