ANALYSIS ON ENHANCING HEALTHY LIFESTYLE AMONG ADOLESCENTS

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Abstract: Healthy habits among adolescents lay the foundations for healthy adult development. They promote positive emotions and over all well-being of an individual. As adolescence is a period of rapid change in mental, physical, cognitive and social development it is important that they practice healthy habits of adequate sleep, diet and exercise. The main objective was to examine whether there were differences in positive and negative affect among the different groups of adolescents categorized on the basis of their sleep pattern, physical exercise habits and eating habits. The sample comprised of 801 adolescents (boys = 403; girls = 398) belonging to the age range of 11 to 20 years. The main variables were examined using Positive and Negative Affect Schedule. The statistical techniques employed for analysis of the data were Descriptive statistics and Student's t-test. The results showed that adolescents did not differ in their levels of positive affect with regard to their sleep. However, there was significant difference in negative affect among the adolescents with different patterns of sleep. The adolescents who do not have adequate sleep have higher negative affect than those adolescents how have adequate sleep. The early adolescents had higher levels of negative affect than late adolescents. The adolescents who have adequate exercise have higher positive affect than those adolescents who have no adequate exercise. There was no significant difference in the adolescents in their affect with regard to their diet habits. These findings have implications for future research in the promotion of healthy practices among the adolescents for enhancing positive emotions in them.

Keywords: Healthy Habits, Positive Affect, Negative Affect, Adolescents.

Introduction: As the saying goes 'Health is Wealth.' It is import to develop a healthy lifestyle at a young age, to lead a healthy and happy life. Healthy habits among children lay the foundation for positive adult development. (Danner 2000; Ge et al. 2001; Siegel et al. 1999; USDHHS 1996). Adolescence begins at around age 10 and ends around age 21. During this period there is a rapid change in mental, physical, cognitive and social development. The adolescent girls and boys become more keenly aware of their gender than they were as younger children, and they make adjustments to their behaviour or appearance in order to fit in with perceived norms. They gain autonomy to make their own decisions and judgements on their daily habits and lifestyle thereby setting patterns that continue into adulthood (Serdula et al. 1993).

The most fundamental health habits include adequate sleep, diet and exercise. Amount of sleep is an important indicator of health and well-being in children and adolescents. Adequate sleep of 6–8 hours per night regularly is a critical factor in adolescent health and health-related behaviours (Hughes, Rogers, 2004; WHO, 2005). Humans spend almost a third of their lifetimes sleeping; quality sleep is essential to human health. Studies have shown that the average amount of sleep per night for prepubescents, mid-adolescents and old-adolescents was 10, 8 and 7 hours, respectively (Kahn , Franco , Groswasser , Scaillet , Kelmanson ,& Kato, 2002) . In adolescents, sleep influences physical and emotional well-being, brain maturation, substantial biological and psychosocial changes in puberty, and the interaction between physical and psychosocial domains (Dahl & Lewin ,2006).

Exercise and physical activities help keeping adolescents healthy. Adolescents need at least 60 minutes of moderate to vigorous physical activity on most days for maintenance of good health and fitness and for healthy weight during growth. Physical activity during childhood and adolescence may have a positive impact on growth and development and psychological and emotional outcomes that may continue into adulthood (Ross & Hayes, 1988). Inactivity, in particular TV viewing, has been associated

with obesity in cross-sectional studies of children, adolescents, and adults (Gortmaker et al., 1996). Adolescent physical activity includes work at school or home, travel-related activity, activity during work for those with jobs, participation in individual and team sports, and leisure activities (play). To be active during the day they have to eat healthy.

There is phenomenal growth that occurs in adolescence and therefore creates increased demands for energy and nutrients. Total nutrient needs are higher during adolescence than any other time in the lifecycle. Nutrition and physical growth are integrally related; optimal nutrition is a requisite for achieving full growth potential .Failure to consume an adequate diet at this time can result in delayed sexual maturation and can arrest or slow linear growth. (Story, 1995). Prior to puberty, nutrient needs are similar for boys and girls. It is during puberty that body composition and biologic changes (e.g., menarche) emerge which affect gender-specific nutrient needs. Nutrient needs for both males and females increase sharply during adolescence. Nutrient needs parallel the rate of growth, with the greatest nutrient demands occurring during the peak velocity of growth. At the peak of the adolescent growth spurt, the nutritional requirements may be twice as high as those of the remaining period of adolescence (Forbes, 1992).

Despite the overwhelming consensus that both sufficient sleep, diet and adequate exercise are pivotal in maintaining health, these behaviours are often not prioritized within the typical adolescent as well as adult lifestyle. For example, the Centers for Disease Control and Prevention estimate that nearly one-third of adults sleep less than the recommended seven hours per night needed to maintain optimal health (Watson N. F., et al. 2015., Liu Y., Wheaton A. G., Chapman D. P., Cunningham T. J., 2016.). An even larger sleep deficit is observed in teenagers, roughly two-thirds of high-school students, who are advised to sleep eight to ten hours, receive less than eight on school nights. Chronic sleep deprivation has been shown to increase the risk for a host of physical and mental illnesses (Paruthi S., et al 2016).

Encouraging healthy lifestyles in children and adolescents is important for when they grow older. Lifestyles that are learned in childhood are more likely to stay with the child into adulthood. Some changes in lifestyle can be harder to make as a person ages. A healthy lifestyle brings in positive affectivity, a trait reflecting more cheerfulness, enthusiastic, and energetic emotional experience. On the other hand, lower levels of positive affectivity can be related to sadness, lethargy and distress. However, low positive affectivity does not necessarily mean negative affectivity. In fact, positive and negative affectivity are independent from each other. Negative affectivity is often defined as a variety of negative emotions, including anger, disgust, fear, etc. A person can be high in both positive affectivity (PA) and negative affectivity (NA), or high in one and low in the other, or low in both. This all depends on our life style, surroundings and environment.

Adolescent well-being will be reflected in adulthood and old age. Today, however, most empirical work on affect and healthy lifestyle habits has been examined in adults (Holder, 2012). As a result, there is less information on health habits and its influence on affect in adolescence. Examining the association of healthy life style practices and emotional wellbeing in adolescents requires comprehensive knowledge of the multiple factors that influence how adolescents perceive their own lives (Forste & Moore, 2012). Thus, the complex interplay between adolescents and environmental factors should be investigated in order to better understand what leads to developing positive affect. Unfortunately, literature in this area is limited. The lack of research on adolescent health habits and affect is somewhat surprising as today's society places such great emphasis on the development of well-being in youth.

General well-being is central to healthy development (Forste & Moore, 2012). Parents, teachers, and others who work to promote the positive development of children and adolescents should identify early markers, predictors, processes, and risk factors influencing unhealthy habits in adolescence. One is able to form the foundation for health promotion, prevention and treatment measures by starting early healthy habits. The relationship between adolescents, environmental factors, health habits and affect in specific, is perhaps best explored by quantitative research. The findings of the study are expected to

throw light on the factors that enhance positive affect through healthy habits as well as areas in which interventions are possible to facilitate a healthy living and promote optimum well-being.

Objective: To examine whether there are differences in positive and negative affect among the different groups of adolescents categorized on the basis of their sleep pattern, physical exercise habits and eating habits.

Method:

Participants: The sample comprised of 801 adolescents (boys = 403; girls = 398) belonging to the age range of 11 to 20 years (Early adolescent 11-14 years, Middle adolescents 15-17 years, Late adolescents 18-20 years). Employing simple random sampling technique, educational institutions were drawn from various educational institutions under the Thrissur corporation of Thrissur district of the state of Kerala, and the sample was drawn using stratified random sampling using the following inclusion /exclusion criteria.

Inclusion Criteria:

- Age above 11 years, and below 20 years
- Adolescents having no identified physical /mental disorder
- A minimum ability to read and write

Exclusion Criteria:

- Those below 10 years of age and above 20 years of age
- Non school going adolescents

Instruments: Only questionnaire measures were used in the study. Well established measure having high reliabilities and demonstrated validities were used to obtain data regarding positive and negative affect. In addition to this a personal data sheet was used to obtain the socio demographic profile of the respondents.

The following tools were used for obtaining relevant data

A Personal Data Sheet developed by the investigator was used to collect data regarding the socio demographic characteristics of the participants. The personal details like age, gender, sleep habits, eating habits, physical activities and so on were obtained using the personal data sheet.

Positive and Negative Affect Schedule': The 'Positive and Negative Affect Schedule' developed by Watson, Clark and Tellegen (1988) was used to measure the two dispositional mood dimensions of positive affect and negative affect of the participants. The PANAS consists of two 10-item mood scales designed to provide independent measures of positive affect and negative affect. The respondents are asked to rate the extent to which they have experienced each particular emotion within a general time period, with reference to a 5-point Likert scale. The inter correlations and internal consistency reliabilities of the scale are high, ranging from .86 to .90 for positive affect and from.84 to .87 for negative affect. The 8 week test-retest reliability found that the values increased as the time- instruction increased from momentary feeling to feeling in general, alpha reliabilities ranging from .47 to .68 for positive affect and .39 to .71 for negative affect (Watson, Clark, & Tellegen, 1988).

Procedure: All the schools under the Thrissur corporation were listed and out of the 52 schools and 5 arts and science colleges 13 schools and 2 colleges were randomly selected. The participants from the selected colleges and schools were randomly selected using stratified random sampling. They were then met individually and a brief detail on the purpose of the study was given. After getting their informed consent, the tools were given to them and were allowed to complete the questionnaires at leisure. The participants were selected based on the inclusion/exclusion criteria adopted. The collected data were analyzed using the statistical techniques of Student's t-test.

Results and Discussion: The participants were divided based on whether they have adequate sleep or not based on their age group. The result from Table 1 shows that 76.7 percent of the early adolescents have adequate sleep while 23.3 percent of them do not have proper sleep. Eighty percent of the middle adolescent group have adequate sleep while 20 percent do not have adequate sleep. Among the late adolescents 85.5 percent have adequate sleep while 14.5 percent do not have proper sleep. Adequate sleep is observed in 80.1 percent of the total participants while only 19.9 percent of the participants have lack of adequate sleep. It is evident that majority of the participants have more than six hours of sleep.

Table 1: Distribution of the Different Groups of Adolescents Based on Adequate Sleep or Not

Age	Sleep		
	No	Yes	Total
Early	70 (23.3)	231(76.7)	301(100)
Middle	60(20)	240(80)	300(100)
Late	29(14.5)	171(85.5)	200(100)
Total	159(19.9)	642(80.1)	801(100)

*percentages are in parentheses

The participants were divided based on whether they have adequate exercise or not based on their age group. The result from Table 2 shows that 50.5 percent of the early adolescents have adequate exercise while 49.5 percent of them do not have proper exercise. Among the middle adolescent group 45.3 percent have adequate exercise while 54.7 percent do not have adequate exercise. Among the late adolescents 33 percent have adequate exercise while 67 percent do not have proper exercise. Exercise is part of 44.2 percent of the total participants, however 55.8 percent of the participants do not include exercise as part of their daily regime.

Table 2: Distribution of the Different Groups of Adolescents Based On Adequate Exercise or Not

Age	Exercise		
	No	Yes	Total
Early	149(49.5)	152(50.5)	301(100)
Middle	164(54.7)	136(45.3)	300(100)
Late	134(67)	66(33)	200(100)
Total	447(55.8)	354(44.2)	801(100)

*percentages are in parentheses

The participants were divided based on whether they have adequate healthy diet or not based on their age group. The result from Table 3 shows that 62.8 percent of the early adolescents have adequate healthy diet while 37.2 percent of them do not have a healthy diet. Among the middle adolescent group 73 percent have adequate healthy diet while 27 percent do not have adequate diet. Among the late adolescents 50 percent have healthy diet while 50 percent do not have proper healthy diet. Healthy eating habits are followed by 63.4 percent of the total participants while 36.6 percent do not have a balanced healthy diet.

Table 3: Distribution of the Different Groups of Adolescents Based on Adequate Diet or Not

Age	Diet		
	No	Yes	Total
Early	112(37.2)	189(62.8)	301(100)
Middle	81(27)	219(73)	300(100)
Late	100(50)	100(50)	200(100)
Total	293(36.6)	508(63.4)	801(100)

*percentages are in parentheses

Comparisons Based on Adequate Sleep: Sleep disturbance or deprivation may lead to daytime sleepiness and decreased mental acuity and thus negatively affect normal growth and the ability of adolescents to learn in school (Giannotti, Cortesi , Sebastiani , & Ottaviano,2002; Wolfson, & Carskadon, 2003). Research specifically addressing the effects of adequate sleep on affect within adolescents seems scarce. A comparison between the those adolescents who have adequate sleep and those who do not have adequate sleep in their positive affect and negative affect were made and the results are discussed below.

Table 4: The Mean And The Standard Deviation Of The Scores Obtained By The Adolescents Having Adequate Sleep And Those Who Do Not Have Adequate Sleep And The Corresponding 'T' Values

Variables	Having adequate sleep (N=642)		Not having adequate sleep (N= 159)		't'
	Mean	SD	Mean	SD	
Positive affect	31.97	7.212	32.38	6.829	.681
Negative affect	24.99	7.189	26.92	6.925	3.051*

*Significant at the 0.05 level

The result from the above table revealed that there is no significant difference among the adolescents in their positive affect (t=0.68;p<0,05)with regard to their sleep. However, there is significant difference in negative affect (t=3.05;p<0.01) among the adolescent with different patterns of sleep. The adolescents who do not have adequate sleep have higher negative affect (M=26.92) than those adolescents how have adequate sleep (M=24.99). Negative emotions, including anger, contempt, disgust, guilt, fear, and nervousness are more in adolescents have poor sleep than those having good quality sleep. Studies have shown that poor sleep quality is associated with social factors such as difficulty in dealing with problems, increased anxiety and tension, and behavioral problems, and has a negative effect on academic performance (Pilcher , Ginter , &Sadowsky,1997; Vignau, Bailly , Duhamel , Vervaecke , Beuscart ,& Collinet, 1997). Sleep quality has an influence on the negative affect of the adolescents.

A comparison between those adolescents who have adequate exercise and those who do not have adequate exercise in their positive affect and negative affect were made and the results revealed (Table 5) that there is no significant difference among the adolescents in their negative affect (t=1.43;p<0,05)with regard to their exercise. However, there is significant difference in positive affect (t=2.91;p<0.05) among the adolescent doing exercise. The adolescents who have adequate exercise have higher positive affect (M=32.88) than those adolescents who have no adequate exercise (M=31.39). Positive emotions like happiness, joy, gratitude, serenity, interest, hope, pride, amusement, inspiration, awe and love are more in adolescents who have regular exercise than those having no adequate exercise. Doing exercise has an influence on the positive affect of the adolescents.

Table 5: The Mean And The Standard Deviation Of The Scores Obtained By The Adolescents Having Adequate Exercise And Those Who Do Not Have Adequate Exercise And The Corresponding 'T' Values

Variables	Having adequate exercise (N=354)		Not having adequate exercise (N= 447)		't'
	Mean	SD	Mean	SD	
Positive affect	32.88	7.471	31.39	6.795	2.917*
Negative affect	25.78	7.335	25.05	7.037	1.432

*Significant at the 0.05 level

A comparison between the those adolescents who have adequate diet and those who do not have adequate diet in their positive affect and negative affect were made and the results are revealed in Table 6.

Table 6: The Mean And The Standard Deviation Of The Scores Obtained By The Adolescents Having Adequate Diet And Those Who Do Not Have Adequate Diet And The Corresponding 'T' Values

Variables	Having adequate diet (N=508)		Not having adequate diet (N= 293)		't'
	Mean	SD	Mean	SD	
Positive affect	31.88	7.157	32.35	7.101	.898
Negative affect	25.74	7.202	24.73	7.093	1.944

The results from the above table reveal that there is no significant difference in the adolescents in their affect with regard to their diet habits. It was observed in the present investigation that eating habits or diet do not have an influence on the adolescents affect.

Conclusions: The present study has contributed significantly to the existing body of research on healthy habits and positive affect and negative affect among adolescents. The findings of the study have provided baseline information on the influence of adequate sleep, diet and exercise on positive affect and negative affect among adolescents in our culture. The findings provide areas to be addressed in enhancing healthy lifestyle among adolescents.

Scope Of The Study: Based on the results obtained in the present study, the following implications are enumerated:

- The findings of the study have provided baseline information the influence of adequate sleep, diet and exercise on positive affect and negative affect among adolescents in our culture.
- The findings of the study can be used as basic empirical evidence that may serve as the basis for the development of training and intervention programmes and the formulation of public policies aimed at promoting healthy lifestyle which leads to the enhancement of human well-being. Nutritionist, adolescent counsellors, and all those concerned with the enhancement of a healthy life style and positive mental health , both at individual and global levels, can make fruitful use of the present findings.

Limitations: Despite all attempts to carry out the study scientifically and systematically, the study had the following limitations.

1. The present study included only the adolescents sample ranging in age from 11-20 years. Including adults could give a more complete picture regarding healthy lifestyle and positive well-being.
2. Only quantitative and questionnaire measures have been employed in the present investigation. Employing qualitative methods as well, may yield more and deeper information in this area.
3. Inclusion of other variables like body image, obesity, stress, and so on could give a more comprehensive picture of healthy living and positive mental health .
4. The research was based on the data obtained from self-report measures. The inherent drawbacks and limitations of survey research might have affected the study results.

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