# Patterns of Passive and Active Cultural Activities among 13- 18 Year Old Norwegian High School Students

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DOI: 10.5963/PHF0104001

***Abstract-*** **Several studies illuminate positive relations between health and passive versus active cultural activities. However, current knowledge on the patterns of participation in cultural activities of adolescents in a humanistic health perspective is limited. Aims: the aim of the study was to investigate the patterns of participation in passive versus active cultural activities among adolescents out of a humanistic health perspective. Methods: junior high and high school students from two municipalities in the county of Nord-Trondelag, Norway, aged 13-18 year (n=71) completed a self-administered questionnaire. Results: five passive cultural activities ranked highest among adolescents. Active cultural activities were ranked sixth on the list. Junior high school students gave priority to the active cultural activities. High school students preferred passive cultural activities. Conclusions: out of a humanistic point of view both passive and active cultural activities should be aimed in health promotion programs.**

***Keywords- Adolescents; Health Promotion; BMI; Cultural Activities***

## I. INTRODUCTION

The cultural sector has developed fast in the last decades. The concept of culture in broadest understanding embraces both physically passive and physically active cultural activities [1]. Active cultural activities are defined as participation in activities of moderate and vigorous activity. Passive activities include all other cultural activities without strenuous physical participation. Sisjord [2] states that youth-culture as a subculture is related to the main culture, either as a more specialized relationship or as an expression of a more suppressed position. When studying cultural attendance among youth, it is illuminating to study physical activity in relation to other cultural lifestyle activities. Social cultural activities may be as effective as fitness activities by lowering the risk of death [3].

Physical activity during adolescence is positively related to physical fitness and health in general [4]. Reduction in physical activity and increasing sedentary lifestyle are well known changes in patterns of behavior. The decline in physical activity is increasing by age and greater for girls than boys [5]. Furthermore differences between girls and boys regarding sedentary behaviour and consequently risks of overweight are suggested [6].

Physical activity is inherently healthy for young people [7-9]. However, the evidence is not always clear [4]. There are no convincing studies linking health in adulthood with adolescence and childhood activity patterns [4]. The positive psychological climate and social interactions attached to such settings may be more crucial than the physical activity itself enhancing psychological well-being [10].

Lifestyles of adolescents such as physical activity may influence health status but may also be linked to cultural attendance. Cultural activity might be thought to increase resistance to a broad spectrum of diseases or to be the impetus to start dealing with certain physical or psychological problems [11].

The humanistic interpretation [12] is that human beings can achieve a holistic state of wellbeing through cultural attendance. This stresses the importance of exploring how cultural activities can be used in a health perspective. In a humanistic approach to health, health is absence of mental and physical nuisances and the focus is on health on one side and on the other side the factors that impact health and the social interactions between the cultural activities and health. Cultural attendance may have a potential of promoting public health. Several studies have revealed a difference between gender and age groups [7, 13]. It may be possible to participate intensive in both kinds of cultural activities [14]. This may be in incongruence with the displacement theory [15], which states that participating in one kind of activity exclude participation in another.

More passive cultural activities may enhance positive interactions. Social participation in cultural, religious and social activities predicts survival [16]. Cultural participation has also a positive influence on personal development [17]. Johansson et al. [18] suggest that psycho-neuroimmunological theories may be of interest. Research indicates positive influence from music and singing on central physiological variables like blood pressure, heart rate, respiration and immune and endocrine functions [19]. Furthermore the ecological approach supposes that the passive cultural activities may be seen as a trigger for socializing and participating in other cultural activities as well as in physical active activities [20]. Linn Getz [21] concludes that social and cultural situations are highly relevant when predicting health. Policy, research and practice are now regarding health not only as a medical and statistical concept, but also in terms of emotional satisfaction, social connectedness and well-being. However, knowledge of how cultural attendance is connected to health in adolescence is limited.

## II. AIMS

The aim of the study was to reveal the distribution of participation in the different cultural activities. Out of a humanistic health perspective, the study will regard sedentary as well as more physically cultural activities.

Additionally, the study focused on associations between gender, age groups, BMI and participation in cultural activities.

## III. METHODS

### A. Subjects

A total of 200 adolescents from two municipalities in Nord-Trondelag County, Norway were contacted. They were randomly selected from four different high schools and an invitation was distributed by the teachers at the schools. 71 participants signed in to participate including junior high and high school students aged 13-18 year. 62 students (26 boys and 36 girls) completed all parts of the study [22]. The fact that just 62 adolescents fulfilled all parts of the investigation was due to personal and situational circumstances like illness, holidays and exams. Sample size was estimated to extend 58 persons or more, by an effect size of 0.5 at a power level of 0.8, which is a moderate one.

### B. Survey

The study included questionnaires with closed answers and clinical examination that included measurements on height, weight. The students completed a self-administered questionnaire concerning sport, physical activity and passive cultural attendance. The students completed the questionnaire on two occasions with 8-12 days interval.

### C. Ethics

The ethical approval of the study was obtained from the Norwegian Data Inspectorate Board and the Regional Committee for Ethics in Medical Research following the principles outlined in the Declaration of Helsinki. An informed written consent was obtained of the students self (≥ 16 years) and of the parents for students younger than 16 years.

### D. Test-Retest

To test the reproducibility of data, a test-retest was executed. The selection was made on basis of the highest Scotts Phi values, lowest categorical deviation and acceptable test-retest reliability of categorical deviation.

### E. Passive Cultural Activities

To assess passive cultural activity, the students answered eleven closed questions about attending cinema, going to the theatre, reading books, being a sport- spectator, making art and handcraft, playing music, using PC, listening to music, doing homework, using mobile phone and watching TV.

### F. Active cultural activities

To assess active cultural activities, the participants answered eleven closed questions about cross country skiing, football playing, horseback riding, ice skating, participating in different ball sports, cycling, athletics, swimming, gymnastics, dancing and slalom skiing.

### G. Outcome variables

Two indexes were computed; one for the 11 passive and one for the 11 active cultural activities. z-scores and t-scores were computed for included variables in the indexes to deal with weighting problems.

### H. Anthropometric measures

Height and weight measures of all participants were recorded by the qualified researchers. Height was measured to the nearest 0.5 cm, without shoes by using a calibrated wall-mounted measuring instrument. Body weight was measured to the nearest 0.1 kg using a calibrated laboratory scale (Heine Professional, 7800).

Body mass index (kg/m2) (BMI) was calculated as body weight (kg) divided by the square value of height (m). To define underweight, overweight and obesity, we used cut-off values, specified for each half year interval for adolescents (ISO BMI) proposed by Cole et al. [23].

### I. Statistical analysis

SPSS Inc., Chicago IL, Version 15 was used to complete all analysis. Analysis of variance (One-way ANOVA) and independent t-test analysis assessed differences of means. Multiple linear regressions assessed correlations between variables of gender, age, BMI and passive and active cultural activities.

## IV. RESULTS

Firstly, reliability was statistically calculated using categorical deviation and Scotts phi on answers given twice by test-retest stability test. The test- retest was generally good. The 100% was usually obtained within the second deviation. The lowest reliability coefficients were observed in variables “Making art and handcraft” and “being a sport spectator”. Secondly reliability was evaluated by calculating intraclass correlation coefficients (ICC). The coefficients varied from 0.47 up to 0.76. All were significant at the 1% level.

Boys and girls participated in following cultural activities from highest (133.47) to lowest (6.42) sum-scores of t-values: gym, swimming, football, cross country skiing, PC and music listening. The three most important passive cultural activities for both sexes together were: PC, music listening, and cinema. The three most important active cultural activities were: gymnastics, swimming and football.

Girls participated in following cultural activities from highest (101.19) to lowest (22.35) sum-scores of t-values: horseback riding, gymnastics, making art and handcraft, doing homework, music listening, ball sports by hand. The three most important passive cultural activities for female adolescents were: doing homework, music listening and

making art and handcraft. The three most important active cultural activities were: horseback riding, gymnastics, and ball sports by hand.

Boys participated in following cultural activities from highest (133.67) to lowest (6.42) sum-scores of t-values: football, slalom skiing, cycling, TV watching, using PC and cross-country skiing. The three most important passive cultural activities for male adolescents were: TV-watching, using PC and cinema. The three most important active cultural activities were: football, slalom skiing, and cycling.

Though, there was no significant difference in the amount of participation in active and passive cultural activities between genders. There was also no indication of significant difference in choice between passive and passive cultural activities, neither in girls nor in boys.

The group of the younger adolescents (<16 years) participated significantly (p<0.01) more than the older adolescents in the active cultural activities, composed into one index. The group of the older adolescents (≥16 years) participated slightly but not significantly more than the group of the younger adolescents in the passive cultural activities. But, the difference between participation in the passive and active cultural activities for all ages was significantly (0< 0.01). Our data revealed no significant difference in choice between the passive and active cultural activities in regard to weight status (Table I).

Table I indicates that the mean value of age groups are significantly associated with active cultural activities (F= 17.8, p=0.00) and even so for the difference between mean t- values of the passive and active cultural activities (p=0.00).

TABLE I GENDER, AGE AND BMI ASSOCIATED WITH ACTIVE AND PASSIVE CULTURAL ACTIVITIES (MEAN VALUES (ANOVA) AND DIFFERENCE OF MEAN)

| | | Active Cultural Activities | | | Passive Cultural Activities | | | Difference |
|---|---|---|---|---|---|---|---|---|
| **Variable** | **Subgroup** | **Mean (Lowest-Highest)** | **F-Value** | **P-Value** | **Mean (Lowest-Highest)** | **F-Value** | **P-Value** | **Mean P-Val** |
| gender | | | 0.00 | 0.96 | | 1.77 | 0.18 | 0.29 |
| | male | 552.29 (489.69-707.49) | | | 554.58 (516.91-656.16) | | | 1.60 |
| | female | 551.77 (489.69-671.77) | | | 541.70 (388.45-594.74) | | | 1.46 |
| age | | | 17.80 | 0.00 | | 1.38 | 0.24 | 0.00 |
| | 13-15 | 569.87 (489.69-707.49) | | | 544.06 (388.45-594.74) | | | 1.31 |
| | 16-18 | 526.39 (489.69-616.44) | | | 555.56 (509.97-656.16) | | | 1.84 |
| BMI | | | 0.23 | 0.63 | | 2.53 | 0.11 | 0.96 |
| | underweight/ normal | 553.32 (489.69-707.49) | | | 547.32 (388.45-602.47) | | | 1.55 |
| | overweight/ obesity | 545.92 (509.74-630.20) | | | 567.58 (494.17-656.16) | | | 1.54 |

n=62

Note: Difference in mean values between t- values of the passive and active cultural activities:
1: very active 2: very passive

The study revealed on the contrary a significant difference between gender concerning specific cultural activities. Girls preferred “homework”, “music listening”, “making art and handcraft” and “horseback riding”. Boys gave priority to “slalom skiing” and “football” (Tables II and III). Table II indicates a correlation between passive cultural activities and BMI. The correlation is almost significant (t=1.89, p=0.06). Table III shows a significant difference between girls and boys concerning preferences for selected cultural activities. Girls preferred “homework”, “music listening”, “art, handcraft making” and “horseback riding”. Boys gave priority to “slalom” and “football”.

TABLE II GENDER, AGE AND BMI ASSOCIATED WITH PASSIVE CULTURAL ACTIVITIES (LINEAR REGRESSION)

| Variable | B | SE | β | t value | p value | Mean |
|---|---|---|---|---|---|---|
| Gender | -7.67 | 9.85 | -.10 | -.77 | 0.43 | 1.44 |
| Age | 4.86 | 10.24 | 0.06 | .47 | 0.63 | 1.44 |
| BMI | 3.25 | 1.71 | 0.24 | 1.89 | 0.06 | 20.67 |

n: 62

TABLE III T-TEST FOR EQUALITY OF MEANS FOR FEMALES AND MALES

| Variables | Preference by gender | t | CI 95 Lower | Upper | Sign (2-tailed) |
|---|---|---|---|---|---|
| Doinghomework | Girls | 3.26 | 2.84 | 11.76 | 0.02 |
| Listening music | Girls | 2.05 | 0.13 | 9.39 | 0.04 |
| Making art | Girls | 2.00 | 0.01 | 9.37 | 0.04 |
| Horsebackriding | Girls | 3.00 | 2,27 | 11.24 | 0.00 |
| Slalom | Boys | 27.06 | -10.07 | -0.92 | 0.01 |
| Football | Boys | 34.06 | -11.20 | -2.23 | 0.00 |

n: 61

Figure I illustrates the distribution of the importance of various cultural activities, five passive cultural activities ranked highest among adolescents more specifically "TV Watching" and "Mobile phone use" are ranked highest. Runner up is "Music listening". Other important activities are "Homework" and "PC". Active cultural activities were ranked 6th on the list (Figure 1). Active cultural activities are ranked 6th on the list of ranking.

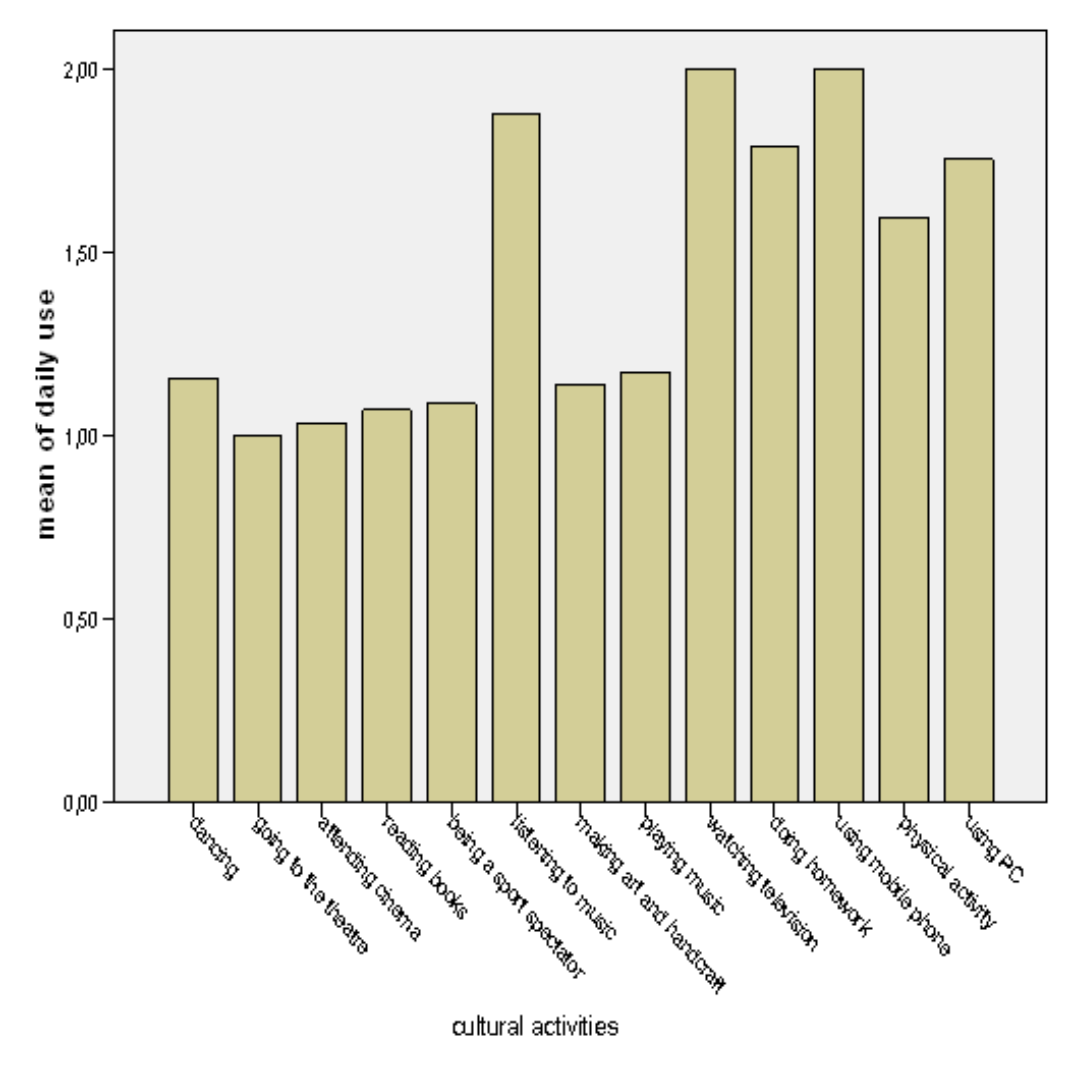


Figure 1 Distribution of the importance of various cultural activities n: 71
Lowest possible value of each activity: 1(< daily)
Highest possible value of each activity: 2(≥ daily)

## V. DISCUSSION

Our data revealed that girls participated as much as boys in passive and active cultural activities. Although, the choice of particular active or passive activities seems to be gender dependent. Participation in passive activities does not exclude participation in active. In relation to weight status, our data do not support the idea that overweight adolescents mainly chose passive activities. Young adolescents clearly prefer active cultural activities in contrast to the older adolescents who prefer to participate in passive cultural activities.

World Congress of Cultural Politics in Mexico [1] stated that culture in the broadest understanding implicates the

whole complexity of the spiritual, materialistic, intellectual and emotional qualities which describe a society or group in a society meaning that both active and passive cultural activities are included. Girls and boys participated at a high frequency in passive as well as active cultural activities. This is congruent to the study of Marshall et al. [14] and do not support the displacement theory [15], stating that the determinants for physical activity are likely to be different from those of sedentary behaviors. Additionally, according to Mulvihill et al. [24] and the Ecological Approach [20] the more passive cultural activities may be seen as a kind of trigger for participating in other passive cultural activities as well as the physical active cultural activities. Studies of Wang and Biddle [25, 26] assume that whether an adolescent participate or not can be due to the psycho-social influences the passive cultural activities enhance. Concerning the cultural activities, the study cannot underscore a significant association between the passive cultural activities nor the active activities with neither of the sexes. This study is also congruent with the conclusion of Harrell [27] concluding that the girls and boys who participated frequently in passive cultural activities also participated in the active cultural activities.

Trendy passive cultural activities like screen activities (IT) and media ranked highly among the students. The results supported the findings of Heim [28]. In his study girls watched less TV than boys. Heim reported that art and handcraft would diminish in proportion to use of IT- activities. This study revealed that "Making art and handcraft" was preferred above "PC- use" by girls. It has to be noted that Heim's study had younger attendants and maybe the younger subjects are more active in active cultural activities than the older ones. This study is congruent with the conclusion of other American studies [29]. They found that specific activities of mid and high school girls were more domestic and sedentary.

We revealed that age seemed to be an important factor in the choice of cultural activities. These findings are supported by the study of Wardle [5]. The older high school students seemed to participate significantly at a higher rate in passive cultural activities, regarding the whole specter of passive and active cultural activities.

Based on the participants' anthropometric values of BMI, the adolescents in the study were comparable to those in other studies [23, 30]. BMI-mean was relatively low in this present study. This may be due to the fact that there were equal numbers of subjects in the underweight and obesity groups. This is congruent with the study of Bjørnelv [31]. She stated that relatively more girls were represented in the underweight group. Our study revealed no clear preference of passive cultural activities in overweight adolescents. This is in incongruence with the results of Martinez-Gonzalez [32], who found that the prevalence of sedentary behavior was high in obese subjects. It may be discussed that in congruence with Harrell [27] who suggested that factors other than the most preferred activities were important in predicting obesity. Consequently, it may be of importance due to the inconsistency in determination of which kind of activities are involved in obesity, to investigate conceptually all the leisure time activities of adolescents and take the whole specter of cultural activities into account.

Our study suggested a significant difference between gender concerning preferences of specific cultural activities, but not in the choice between passive or active cultural activities. Comparing data on specific active cultural activities of females and males the study assessed a significant difference in participation. Boys preferred "slalom skiing" and "football". Girls gave preference to "horseback-riding" and participated less in "slalom skiing" than boys. The participation in horseback riding by female students may be supported by a predominance of female members in the Norwegian Horsemen Association (NRF). Girls participated significantly more frequently in three passive cultural activities: "Making art and handcraft", "Homework" and "Listening to music". The girls ranked some specific passive activities, like doing homework and art and handcraft above the active ones. This may be due to certain differences in social role learning. Girls may be brought up to prefer those kinds of activities. This is supported by Sisjord [2].

It may be concluded that the adolescents were spending much time watching TV, using mobile phone but also doing a lot of physical activities. The results support the findings of the study by Taveras [33]. Comparing the "sum-scores of importance" active cultural activities were definitely not ranked highest among adolescents. However, the study did not conclude a distinct difference in participation rates.

Most of the studies on lifestyles [6-8, 13, 28] use the analyses of the sedentary behavior of adolescents to argue to increase the activity level among children. This study highlighted the importance of passive cultural activities in health promotion programs as well. At first due to the specific preferences of the adolescents themselves and secondly, in our study, passive cultural activities were not related to overweight. Some of the passive activities we have operationalized as passive activities may have not a negative impact on weight status.

The prevailing psychological climate and social interactions inherent to such settings will be more crucial than the physical activity itself in enhancing psychological well-being [33]. Few studies stress the negative effects of focusing too intensively on physical activity and BMI [34]. In a humanistic health, perspective health and well-being are much more than a biological well-functioning [21]. Changes in environmental and lifestyle cultural activities do not focus individuals' biological factors and do not initiate harmful victim blaming consequences. There are no convincing studies linking health in adulthood with childhood activity patterns [4].

In conclusion, all the findings in previous studies in addition to the findings of the present study illustrate that out of a humanistic health perspective both kinds of cultural activities should be investigated and used in aiming public health. Cultural participation may have an effect on public health by stimulating both kinds of cultural activities aiming for a holistic state of well- being. Moreover, the impact of the

different cultural activities and the interactions with other environmental factors is far from clear.

## VI. CONCLUSION

The study revealed no substantial gender differences in patterns of cultural activities, though each gender may have its own specific preferred activities. Females gave priority to doing homework, making art and handcraft and listening to music. Boys preferred football and slalom skiing. Also, older students favored the passive cultural activities. Younger students preferred the active cultural activities. There was no clear opposite character between participation in the passive versus the active cultural activities. At last, it is clear that adolescents do not rank physical activity and sport highest, but rather passive cultural activities.

This study highlights the importance of both passive and active cultural activities in adolescent health interventions. The variety concerning the amount and gender specific cultural activities should not be ignored. From a humanistic health perspective active as well as passive cultural activities should be included in health promotion programs.

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