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Guest Contribution

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Characteristics of leisure research: Trends over three decades

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Abstract

For almost a half century leisure research has been evolving. The purpose of this paper is to describe trends in selected characteristics of leisure research and theory in Leisure Sciences and the Journal of Leisure Research over the past 30 years. A content analysis of the literature from 2003-2012 is compared to previous reviews of these same journals. Small changes are occurring in the categories of theory application, methods used, and the nationalities and sex of the authors. More studies are focusing on theory and model development than in the past. Further, the use of interviews and contemporary methods (e.g., content analysis, observations, time diaries, ethnographies) has increased over the past decade. More research is published from outside the US than in the past. Finally, more research is being co-authored by teams of male and female collaborators with fewer publications from single males.

Keywords: authorship, gender, methods, nationality, theory

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* * *

The research journals in the US that specifically address leisure behavior, Journal of Leisure Research and Leisure Sciences have been available for 45 (i.e., established in 1969) and 33 years (i.e., established in 1982), respectively. Although the content of these journals is of primary concern, reviewing some of the characteristics of the articles may be useful in considering knowledge production into the future (Mullen & Ramirez, 2006). In this paper, we provide an analysis of trends in selected characteristics of leisure research related to theory application, methods, author nationalities, and sex of the rese-archers.

In a review of the leisure research literature from 1992-2002, Henderson, Presley, and Bialeschki (2004) described some of the frustrations graduate students sometimes experienced in linking theory to research. As a field of practice, leisure studies especially in the US often has focused more on the application of findings to practice rather than the use of theory to build a body of knowledge. Although descriptive and evaluative applications are important, constructing a foundation for a field such as leisure studies necessitates the testing and development of theories as well as the application of theoretical and conceptual frameworks. Further, a diversity of authors and methods appear important in the evolution of a field such as leisure studies. Other journals such as Society and Natural Resources (Hall & Steelman, 2007) have been assessed using similar reviews to describe the current state of content and researcher characteristics.

Theory as well as diverse perspectives can integrate fresh answers to persistent questions as well as illuminate emerging issues in leisure studies. The future of leisure studies necessitates continually assessing change and constancies through examining characteristics of theory as an instinctual process of explanation as well as assessing the structure of knowledge production. The purpose of this paper is to describe trends in selected characteristics of leisure research and theory published in Leisure Sciences (LSc) and the Journal of Leisure Research (JLR) over the past 30 years. A periodic internal assessment may improve research efforts and assist in focusing on possible directions for the future.

Examining leisure research

The empirical content analyses for this commentary were modeled after similar review studies conducted by Henderson (1994) and Henderson et al. (2004). The purpose of Henderson's original work was to describe the status of leisure theory during the decade of the 1980s. Henderson et al. modeled this study and further identified selected characteristics of researchers and methods used. The analyses from 2003-2012 provided recent data to allow for descriptive comparisons with these previous studies.

Theory was operationalized as a systematic explanation for describing data and interpreting behaviors. Our analyses addressed the extent to which theory was used in publications to describe, interpret, explain, and/or predict an aspect of leisure behavior. Similar to the previous two studies (i.e., Henderson, 1994; Henderson et al., 2004), the review excluded commentaries, responses, and research/short notes or research reflections. Research articles published from 1993-2012 (10 years) were described (N = 493) and compared from two journals: Journal of Leisure Research (JLR; n = 262) and Leisure Sciences (LSc; n = 231).

In reviewing each article the following data were recorded: the explicated theory or conceptual framework category related to the purpose of the research, the methods used, and the nationalities and sex of the authors. The methods coded included questionnaires, interviews, literature and integrative reviews, mixed methods (e.g., triangulation, linked data), experiments, case studies, secondary data analysis or meta-analyses, group data collection, and other (e.g., content analyses, observations, (auto) ethnographies). All nationalities of authors were coded and then combined to include four main categories: US author(s), Canadian author(s), author(s) from other countries, and combinations of authors from two or more different countries. The sex of researchers were identified as single male author, two or more male authors, single female author, two or more female authors, and combinations of male and female authors with first author sex noted.

Using coding defined in the two previous studies (Henderson, 1994; Henderson et al., 2004), the explication of theory was defined by four categories that included theory/model testing, theory/model development, theoretical/conceptual frame-work applications, and descriptive/evaluative studies:

• Theory/Model Testing was based on whether or not a priori theory or a model was explicated and how the results addressed the theory/model and added to a body of knowledge.

- Theory/Model Development included interpretive research focusing on the substantive theory grounded in a study, or model development that was a result of statistical analyses using quantitative data.
- Theoretical/Conceptual Framework Applications meant that theory, constructs, or concepts were used as the building block(s) and variables that framed a study. All articles used concepts but were not considered a framework unless the concepts were woven into the foundation and rationale for the study. Further, if a model or theory was articulated, but not tested in the research, we categorized the application as a theoretical/conceptual framework.
- Descriptive/Evaluative studies did not formally identify theory, models, or conceptual frameworks to build a rationale for the study or for the application of results. Studies that addressed primarily the application of methods or the development of instruments were also considered descriptive. In some cases, the studies were not atheoretical but the connections were not indicated. Some of these studies applied to a specific setting or practice that made little use of the extension of formal theories.

Using the pre-determined definitions of theory explication as well as a list of possible methods, nationalities of author(s), and sex of author(s), both of us coded the articles and then compared the results. Where differences existed, we discussed the differences until we arrived at consensus for each article. Nationality was based on the address or university affiliation provided on the first page of the articles. In a handful of cases we were unable to determine the

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sex of the authors. The descriptive data for these four characteristics across the decades (i.e., theory application for 1981-1991, 1992-2002, 2003-2012; methods for 1992-2002, 2003-2012; sex of researcher for 1992-2002, 2003-2012; and nationalities of authors 1992-2002, 2003-2012) are presented in figures as each of these characteristics are discussed.

Comparing the categories and how they differed significantly among and between the time periods was of interest. The standardized residuals (i.e., the number of standard errors between the observed and expected frequency) for each cell were calculated as Z-scores. Values of 2 or greater had a p-value of $\leq .05$ and values of 3 or greater had a p-value of $\leq .01$.

Trends based on data and comparisons

The first characteristic explored related to how theory was embodied based on the four categories described above. Figure 1 shows the 2003-2012 data compared to the previous reviews of these same journals.

The number of articles in the Theory/Model Testing category was significantly higher than expected between 1981 and 1990 (Z = 5.27, p <= .01). Statistics showed that the number of Theory/Model Testing articles was significantly lower than expected in the next two time periods (1992-2001: Z = -2.13, p <= .05; 2003-2012: Z = -2.94, p <= .05). The analysis also revealed the number of Theory/Model Development articles was significantly lower than expected between 1981 and 1990 (Z = -6.10, p <= .01) and significantly higher than expected between 2003 and 2012 (Z = 5.51, p <= .01). The data also confirmed that Theoretical/Conceptual Framework articles were below expected between 1981 and 1990 (Z = -2.95, p <= .05) and significantly higher than expected between 1992 and 2001 (Z = 2.85, p <= .05). Finally, the statistics showed the number of Descriptive/Evaluative studies was significantly higher than expected between 1981 and 1990 (Z = 3.09, p <= .01). The data suggested that Theory/Model Testing as well as the use of Theoretical/Conceptual Frameworks increased during the 1990's but then decreased again in the first decade of the 21st century. Conversely, the number of Theory/Model Development articles decreased during the 1990s and increased in the first decade of the 21st century.

The finding that fewer studies addressed theory/model testing may be a reflection on the growing number of interpretive qualitative conducted now compared to the past, and may also indicate the evolution of more sophisticated statistical model development. The explicit use of theory is steadily growing in the leisure literature as evidenced in the decline of descriptive/evaluative studies. Some of the theories that were found in more than one article included: place attachment, leisure coping, leisure specialization, leisure constraints framework, social ecology, serious leisure, flow, and self-determination were often noted. Compared to the topics described in the previous two studies, the prevalence of theory applied specifically to leisure (e.g., leisure specialization, constraints theory) appeared evident whereas in the earlier research (Henderson et al., 2004), much of the theory (e.g., socialization, expectancy, prosocial behavior, dissonance, learned helplessness, normative theory) often was borrowed from other disciplines.

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The second category analyzed was the methods used across two decades. Figure 2 portrays the methods used in the 493 studies published from 2003-2012 compared to the 427 studies conducted from 1992-2002. Quantitative questionnaires remained the most common method in the leisure research examined in JLR and LSc. However, slightly less than half (49%), used this primary method from 2003-2012. The data revealed a significant increase in the number of articles using interviews (Z = 3.50, $p \le 0.01$) and the number of articles using other methods (Z = 3.52, $p \le .01$). Conversely, the data also revealed a significant decline in the number of articles using literature reviews $(Z = 3.36, p \le .01)$ and experiments $(Z = 3.35, p \le .01)$. There was also slightly weaker support for a decline in articles using secondary or metaanalysis (Z = 2.11, $p \le .05$) and an increase in the number of articles using group methods (Z = 2.66, $p \le 0.05$). The trends showed more interviews used in the past ten years as well as group methods (e.g., focus group, nominal group process), and methods from the category called other. These results point to the variety of methods available to leisure researchers and the acceptance of different approaches to data collection and analysis.

The nationalities of the researchers were analyzed to gain a sense of how these journals reflected international perspectives. The comparisons regarding the nationalities of the authors between the two periods of time as shown in Figure 3 indicated a growing number of contributors from outside the US. Other countries that had all authors of an article from a single country from 2003-2012 were Australia (n = 17), Netherlands (n = 6), Taiwan (n = 5), UK (n = 5), Spain (n = 4), Finland (n = 4) and Germany (n = 3), Switzerland (n = 3), and Norway (n = 3).

Across the two time periods, the analysis revealed a significant decrease in authors from the US (Z = 6.30, p <= .01). Alternatively, the data suggested a significant increase in the number of papers published by Canadians (Z = 3.26, p <= .01) and authors from other countries (Z = 2.66, p <= .05). Papers with authors from multiple countries also saw a significant increase between the two time periods (Z = 3.22, p <= .05). Of interest was also the almost doubling of the manuscripts that had authors from two or more countries. The most common research partnerships from 2003-2012 were between the US and Canada (n = 34) and US and South Korea (n = 8). The ease of communication across countries due to the internet as well as growing numbers of international conferences has likely contributed to increased opportunities for collaboration across national boundaries.

Another context for diversity in research was based on the sex of the researchers. We admit that this topic is of interest to both of us as women, but we also believe that diversity and equity of opportunities are important if research is to be interpreted from multiple perspectives. Figure 4 provides a summary of researcher data described in six categories: Single male, two or more males, single female, two or more females, combined male and female, and unknown. Significant statistical differences across the two time periods were found for two of the categories: single males and combined male and female authors. A significant decline in publications by single males (Z = -3.47, p <=01) during the second time period and a significant increase in publications by combinations of male and female authors (Z = 3.63, p <=.01) was identified.

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Several findings regarding the sex of the researchers as well as the coauthoring of articles were notable. First, the number of single authors appeared to decline for both men and women but more dramatically and significantly for males. When an article had only a single author, the number of male authors almost equaled the number of female authors. Interestingly, however, when we examined the sex of the first author in a combined sex team, 54% of the leads were female authors and 46% were male authors. Stated in another way related to the trends, from 1992-2002, 45% of all articles included at least one female researcher with 78% including at least one male researcher. In the 2003-2012, 60% of all articles had at least one woman involved compared to 76% of the articles with at least one man involved. Parity did not exist in the research publications but women appeared to be gaining more opportunities especially related to collaborative work with men.

Interpreting the trends

This commentary presents a descriptive content analysis of leisure research appearing in JLR and LSc pertaining to theory explication, methods, author nationalities, and author sex. The results indicated more theory /model development in the literature during the most recent ten-year period. We would argue that a false dichotomy exists between theory testing/ development and description/evaluation for practice since theory is implicit in all research. All research is based on some theory although it may not always be articulated directly. Research without explicated theory, however, often results in inconsequential information and data that do not add to the accumulated knowledge about the field. When these two leisure research journals were initiated, little was known theoretically about leisure or the management and programming for parks, recreation, and leisure services. Research on topics was important since so little data existed. However, as the field has matured, theory has become more important in how it can guide the research process, form research questions, and aid in the design, analysis, and interpretation of data.

Theory-driven investigations have become necessary for the generalization of findings and development of policies and practice. To effectively build knowledge, a field such as leisure studies should continue to use theoretical structure that facilitates the analysis and interpretation of findings. Some of this theory may relate specifically to leisure behavior while other theory may be borrowed from other disciplines. The debate about whether borrowed theory has hindered the development of the field is beyond the scope of this commentary. More important is that theory development is on the increase in these two leisure journals.

Trends in the methods used in leisure research are changing somewhat. The popularity of questionnaires has diminished slightly with the emergence of more interview methods, group methods, and contemporary approaches. A strength of the leisure literature is the variety of methods that are embodied in the research. Weisinger, Henderson, and Bowling (1997) described the pedagogical changes occurring at universities in the teaching of research methods in parks and recreation. They found that qualitative approaches to research were receiving a new emphasis in research methods classes. The education of scholars in a diversity of methods appears to be linked in the range of approaches used in leisure research today.

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These research journals were also becoming more international both in terms of submissions from countries outside the US and the number of writing collaborations that existed across national boundaries. Roberts (2010) concluded that the study of leisure has become more Anglophone and less diverse. He suggested that contributions from non-Western countries may have become more numerous, but "some are examples of intellectual colonisation, local observers having been trained to adopt a Western gaze" (p. 164). Roberts suggested, however, that the perspectives, questions, methods, and theories are necessarily ethnocentric but that most Anglophone leisure journals are open to receive contributions from other cultures, which was occurring in JLR and LSc as evidenced by the decrease in the percentage of articles from US authors and an increase in papers authored by researchers from other countries.

Finally, although the research remained dominated by male authors, the percentage of female authors involved in collaborative studies was increasing from 2003-2012. The relationship between gen-der, power, and knowledge is complex and cannot be discounted (Aitchison, 2001). Aitchison found in her analysis of JLR from 1982 - 1997 that at least one male was an author for about two-thirds of the articles, which can be compared roughly to JLR and LSc from 1992-2002 with almost three-fourths of the articles having at least one male author (Henderson et al., 2004). The data from both JLR and LSc from 2003-2012 also showed that three-fourths of the articles had at least one male author. Perhaps because of more collaborative work, however, at least one female was an author for 60% of the articles published from 2003-2012. These trends appeared to be going in a positive direction relative to gender parity.

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As noted by Henderson et al. (2004), we also were aware of the limitations of reviews such as this one. First, as Jackson (2004) found and Walker and Fenton reconfirmed (2011), only a few institutions and people are doing a good deal of the published research. Therefore, the characteristics of leisure research may be limited or enhanced by the theory and methods employed by a small number of researchers. Second, the research that is published sometimes reflects the biases of the journal editors and the associate editors of those journals (Aitchison, 2001). These gatekeepers may unconsciously privilege some types of research with particular theoretical or conceptual foundations. Third, the research reflected is also primarily done by North Americans who have a particular culture of empirical research that might be favored in unintentional ways in these US-based journals. Nevertheless, the data comparisons gave a sense of how theory and leisure research have been used and conducted in the past 30 years and imply possibilities for future work.

Our interpretation of the data suggested some directions for future research that might be useful to consider:

• Theories applied to and specific to leisure behavior are emerging in the field. Although theories from other disciplines are important, developing a body of knowledge related to leisure behavior is important. On the other hand, leisure cannot be separated from the rest of life, which could suggest that perhaps leisure theory may be too confining. Further, relying only on previous theories may also mean that the field does not move forward. We advocate, therefore, that leisure is a special aspect of human behavior that ought to be examined theoretically from a

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range of perspectives including efforts toward theory development related specifically to leisure behavior.

- The acceptance of a range of methods and their growth, albeit slow, opens the door for greater theory testing as well as theory development. Although surveys and questionnaires are important, the recognition of other possibilities for research may help to uncover new and more relevant answers for lingering and emerging questions. These methods may also reinforce the implications for social justice and systemic change if the research is to be relevant (Bocarro & Stodolska, 2013).
- As stated by Aitchison (2001), the greater the diversity of people writing in the field, the greater the understandings of leisure theory can be. Thus, the international expansion as well as the greater involvement of female researchers shows a positive evolution for leisure research. Further, a trend seems to be toward research collaboration, which also advances the potential for diversity of views.

Future leisure researchers will have access to a plethora of theories and an array of methods. Hopefully, researchers representing a range of demographic characteristics as well as geographic locations will employ rigorous research strategies to continue to build a dynamic body of knowledge about leisure behavior. The result could be a vibrant arena of social research that informs both theory and practice.

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Research Paper

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Comparative study of well being, thought control, academic achievement and health related physical fitness of active and inactive adolescent school students

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Abstract

The main purpose of the study was to see the comparison of Well Being, Thought Control, Academic Achievement and Health Related Physical Fitness of Active and Inactive Adolescent School Students". The number of sample (N= 300) was selected from the government high and secondary school. 150 Active Adolescent Students and 150 Inactive Adolescent Students were selected by employing purposive sampling technique. The age level of the subjects was ranged from 11 to 17 years. The psychological parameters like Wellbeing questionnaire devised by Bireleson was used to measure possible depression of older age children and adolescent, Thought Control Questionnaire constructed by Adrian Wells and Mark I Davis, was used which contain five sub factors viz. Distraction, Social Control, Worry, Punishment and Re-appraisal were used apart from Academic achievement was assessed on the basis of percentage of marks obtained by the candidate in the final examination and Health

Related Physical Fitness was measured by administering the following tests items Muscular endurance (Bent Knee Sit Ups), Muscular strength (Chin Ups), Cardiovascular endurance (12 Minutes Run and Walk Test), Flexibility (Sit and Reach Test), Body composition (Lean Body Weight and body fat weight) were used as a tool of the study. In order to examine the hypothesis of the study descriptive statistics such as mean and standard deviation were computed. Further, to determine the significant difference the Active and Inactive Adolescent students in the selected parameters Independent t- test was computed separately. In the conclusion of the study it was found that the parameters Well-being, Punishment, Worry, Social control, Re-appraisal, Academic achievement, 12 minutes run and walk, Bent Knee sits ups, Fat weight and Lean body weight showed significant difference between the active and inactive adolescent school students where the aforesaid parameter's mean level was in case of active adolescent students showed higher again the parameters Distraction, Chin ups, Sit and reach test didn't show any significant difference between the two groups.

Keywords: Well Being, Thought Control, Academic Achievement, Active and Inactive Adolescent

* * *

Introduction

Physical fitness has been associated with a variety of health benefits in both adults and children. Making children physically fit and adult as well (Hillman et al., 2008) and improves psychological variables, including depression, anxiety and stress (Eveland-Seyers et al., 2009). Physical education plays a vital role to guide children and adolescents in the process of becoming physically active for life (National Association for Physical Education and Sport [NASPE], 2004). According to NASPE (2004), an important avenue to achieving this purpose is designing learning experiences which foster value, or affect

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for personal engagement in physical activity. Physical education research has used a number of theoretical perspectives to conceptualize student affect as well as identify the factors that influence it and the outcomes it espouses. Physical activity increases muscle tone, improves respiration and circulation, benefits digestion, aids in controlling obesity, promotes rehabilitation after illness and surgery, and stimulates proper growth and development. Physical benefits alone could be sufficient reason for supporting physical education programs. Studies indicate that children in free play settings will not engage in physical activity vigorous enough to produce physical benefits or enhance health, thus supporting the need for physical education (Reiff, 1977). Physical activity enhances a person's life both socially and psychologically. Studies have shown that physical activity may modify anxiety and depression (Sachs 1982). Layman (1972) gave evidence that poor physical condition predisposes individuals to poor mental health. Hanson (1974) stated that "physical activity contributes to the general feeling of well-being It is an avenue for expression of anger, aggression and happiness a means for discovery of self as well as a social facilitator." Moreover, according to Espenschade (1960), "The status of the elementary school child with his peers is dependent to a great extent on his motor skills and his behavior in game situations. Clarke (1982) added to these statements, suggesting that the child's realization of personal and social effectiveness relies heavily on guidance within the physical education experience. Guidance helps the individual adopt desirable modes of behavior and improve interpersonal relationships. The importance of wise use of leisure time was supported as early as 1918 in the Seven Cardinal Principles of Secondary Education (National Education Association). Children need recreational skills and a positive attitude toward exercise to enhance their use of leisure.

Indeed, "Research indicates that motor skills learned in physical education classes may be the stimulus for increased activity during leisure time (Seefeldt, 1977). Gilliam and others demonstrated that physical education programs involving vigorous activities encourage participants to use leisure time more actively. Thus, Physical Education can play a major role in promoting an active, healthy lifestyle. School-based activity be considered an important component in meeting the guidelines for physical activity in adolescents. Physical activity has been found to have a positive casual effect on self-esteem changes in adults. It is estimated that as many as 25% of the population suffers from mild to moderate depression, anxiety, and other emotional disorders. Some cope with these disorders individually, without professional assistance. Studies on depressed patients have revealed that aerobic exercises are as effective as different forms of psychotherapy and that the exercises have had an antidepressive effect on patients with mild to moderate forms of depression. North et al, applying the metaanalysis technique, found that exercise activity is more beneficial than leisure activity for all varieties of depressive disorders. Studies on the effectiveness of anaerobic exercise on depressed patients are quite limited. However, several studies show some improvement similar to that obtained following aerobic exercises. Anaerobic exercise can lead to better results than aerobic exercise. No such studies were undertaken with patients who had severe depressive disorders, although clinical experience indicates a very limited value for exercise intervention. People who swim have been observed to be significantly less tense, depressed, angry, confused, and anxious after swimming. Weight training with free weights is associated with enhanced selfconcept in men. Exercising has helped yoga participants to be less anxious, tense, depressed, angry, and confused, while fencing can increase vigor. En-

COMPARATIVE STUDY OF WELL BEING, THOUGHT CONTROL, ACADEMIC ACHIEVEMENT AND HEALTH RELATED PHYSICAL FITNESS OF ACTIVE AND INACTIVE ADOLESCENT SCHOOL STUDENTS

hanced involvement in physical activity can be beneficial to the well-being of the elderly and can positively affect grade scores of students in primary schools. Physical Wellness Physically Well People. What are their common characteristics? It is based on Health Related Components. Cardiorespiratory Fitness, Body Composition, Muscular Strength, Endurance and Flexibility. Individual psychological benefits of physical activity include: positive changes in self-perceptions and well-being, improvement in self-confidence and awareness, positive changes in mood, relief of tension, relief of feelings such as depression and anxiety, increased mental well-being, increased alertness and clear thinking, increased energy and ability to cope with daily activity, increased enjoyment of exercise and social contacts, and development of positive coping strategies. The physical activities chosen should be personally pleasing and satisfying, as enjoyment is related to exercise adherence. In order to benefit psychologically from physical activity, devries has recommended low-intensity exercise as reflected by 30% to 60% of the difference between resting and maximal heart rate values. Although 20 to 30 minutes of exercise may be sufficient for stress reduction, 60 minutes may result in even more psychological benefit. It seems that a duration of 20 to 30 minutes at least 3 times per week of 60% to 90% of age estimated heart rate max (American College of Sports Medicine) could result in desirable psychological benefits. However, other recreational activities, such as ball games, aquatics, and the like, can be psychologically advantageous as well. Academic Benefits and Physical Education-Research shows a positive relationship between physical activity and academic achievement. In one study, begun in 1951 in an elementary school in Vanves, France, the school day was divided so that four hours were devoted to academics and one to two hours to physical education, art,

music, and supervised study (Bailey, 1976). By 1960, not only were health, fitness, discipline, and enthusiasm superior in the experimental program, but academic performance also surpassed controlled classes. Similar experiments in Belgium and Japan produced comparable results (Carlson, 1982: 68), illustrating the importance of physical education to a successful academic program. Those school boards and educational authorities that have not yet recognized the undeniable link between physical activity and cognitive development must take their cue from others. Physical education is not an optional frill and it must be established in the curriculum as a mandatory subject. The relationships between physical activity (PA) and health-related outcomes are well documented. Indeed, there is evidence that PA provides an array of physical, psychological, social, and emotional benefits for individuals of all ages. It has also been suggested that regular PA could positively influence students' academic performance. The notion of improved academic performance as a result of PA participation is particularly interesting in the Malaysian (Hashim, H.A., Golok, F., & Ali, R.). If a positive relationship between PA and academic performance can be consistently established, this may be a powerful reason to promote regular sports and PA participation within this population. However, the relationships between PA and academic performance are not always positive A positive association between Aerobic fitness and academic achievement has been shown by different studies used composite fitness indices; although in some studies the effect decreased when socio-economic status was controlled for (Shelton, 2009).

Health impact of physical fitness, a growing body of literature has linked physical fitness with improved brain function, cognition and academic achievement (Davis et al., 2007; Tomporowski et al., 2008; Shelton, 2009).

Methods

G. Stanley Hall stated that adolescence is rightly labelled as an age of "Great Stress and Strain and Storm and Strive". As child crosses the threshold of puberty, he suddenly finds himself caught in a biological upheaval, psychological chaos and emotional disequilibrium. Hence the research scholar is keen interested to take up the present study stated as "Comparative Study of Well Being, Thought Control, Academic Achievement and Health Related Physical Fitness of Active and Inactive Adolescent School Students". The main purpose of the study was to compare the present standards of well being, Thought Control, Academic Achievement and Health Related Physical Fitness of Active and Inactive Adolescent school children. The data pertaining to this study were collected on 300 active and inactive Adolescent school Students. Those students were the source of data. The number of sample (N=300) was selected from the government high and secondary school. 150 Active Adolescent Students and 150 Inactive Adolescent Students were selected by employing purposive sampling technique. The age level of the subjects was ranged from 11 to 17year. Test Items: Wellbeing questionnaire devised by Bireleson was used to measure possible depression of older age children and adolescent. Thought Control Questionnaire devised by Adrian Wells and Mark I Davis, was used which contain five sub factors viz. Distraction, Social Control, Worry, Punishment, Re-appraisal. Academic achievement was assessed on the basis of percentage of marks obtained by the candidate in the final examination. Health Related Physical Fitness was measured by administering the following tests items: Muscular endurance (Bent Knee Sit Ups), Muscular strength (Chin

Ups), Cardiovascular endurance (12 Minutes Run and Walk Test), Flexibility (Sit and Reach Test), Body composition (Lean Body Weight and body fat weigh.

Results

The data pertaining to the present study were collected on 300 adolescent school students of which 150 Active Adolescent School students and 150 Inactive Adolescent School students. Their ages was ranging from 11 to 17 years. In order to examine the hypothesis of the study descriptive statistics such as mean and standard deviation were computed. Further, to determine the significant difference the Active and Inactive Adolescent students in the selected parameters Independent t- test was computed separately. For testing hypothesis the level of significance was set at 0.05 which was considered to be adequate for the purpose of the study.

Descriptive statistics and t-ratio for all the factors viz. Well Being, Thought Control, Academic Achievement and Health Related Physical Fitness of Active and Inactive Adolescent School Students

Sl no.	Variable	Group	Mean	Standard Deviation	Mean Difference	Standard Error	t-ratio
1 Well-being	*** ** *	Active students	30.76	7.24	6.06	1.02	5.92*
	weu-being	Inactive students	36.83	10.24			
2	Distraction	Active students	12.03	3.81	.006	.417	.016 @
		Inactive Students	12.02	3.41			
3	Social control	Active students	10.96	3.14	1.06	.378	2.81*
		Inactive Students	12.02	3.41			
4 Worry	¥¥7	Active students	9.25	2.86	6.53	.408	16.00*
	worry	Inactive Students	15.78	4.09			

5	Punishment	Active students	9.55	2.54	5.85	.374	15.61*
		Inactive Students	15.40	3.81			
6	Re-appraisal	Active students	10.50	3.35	5.64	.405	13.91*
		Inactive Students	16.14	3.66			
7	Academic	Active students	81.22	8.34	6.22	1.05	5.92*
,	achievement	Inactive Students	75.00	9.79			
8 12	12 minutes run	Active students	54.92	8.21	. 5.34	.920	5.806*
	and walk	Inactive Students	60.26	7.72			
9	Bent Knee sits ups	Active students	20.18	7.58	7.96	.894	8.90*
		Inactive Students	28.14	7.90			
10	Chin ups	Active students	5.82	4.19	.786	.428	1.83 @
		Inactive Students	5.04	3.14			
11	Sit and reach test	Active students	16.69	7.02	3.84	2.83	.737 @
		Inactive Students	13.85	5.68			
12	Fat weight	Active students	11.84	3.04	3.35	.412	8.14*
		Inactive Students	15.19	4.02			
13	Lean body weight	Active students	43.17	6.33	1.89	717	2.64*
		Inactive Students	45.06	6.09		./1/	

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Significant at .05 level, * significant, @ Not significant, N= 150, Tab. t .05(298) = 1.96

Discussion of findings

The finding of variable Well-being revealed that the Active Adolescent School Students showed significantly better than the Inactive Adolescent School Students in Wellbeing. The reason behind this significant difference may be attributed to the fact that the depression is the joint product of biological, psychological and social factors. Biologically, it has been associated with the imbalances of neurotransmitters in the brain, abnormal secretion of norepinephrine, serotonin and cortisol hormones. Psychologically, depression is

linked to negative thinking patterns. Adolescents who are depressed tend to feel worthless, hopeless, ineffective, isolated, and misunderstood. Socially depressions occur due to having low social support (Rao, 2010), feeling of isolation, family conflict, parental stress and low social achievement (Mazza et al., 2009). A number of researches have proved that participation in sports activity keeps well all dimensions of our health, where wellbeing is also a part of Psychological Dimension. Sports activities enhance Psychological Well-Being, Self-Esteem, will to win, group cohesion and peer group relationship and only if the sports activities are appropriately structured. Physical activity can reduce symptoms of depression and anxiety. So the above evidences are clear enough to show that how active students are dealing as well as enjoying biological, psychological and social factors because of their active participation in sports activities but on the contrary it doesn't happen with the inactive students because they are kept refrain from the involvement in any sports activities; hence it may be the reason to exhibit higher possible depression by the inactive students. The finding of the study is in agreement with the result of (Mazza et. al., 2009)

The finding of Distraction shows that there is no significant difference in the score of thought control's sub factor distraction of Active and inactive adolescent school Students. Distraction is caused by one of the following: lack of ability to pay attention; lack of interest in the object of attention; greater interest in something other than the object of attention; or the great intensity, novelty or attractiveness of something other than the object of attention. Distractions come from both external sources (physical stimuli through the five senses), or internal sources (thought, emotion, fantasies, physical urges). As both the groups are belonged to adolescent stage, therefore it could be a reason that the sub factor distraction does not show any significant difference because in this stage most of the adolescents possess butterflies tendencies, they always try to finds more interesting things than their existing one, most children bubble over with restlessness. On their feet, they dash from here to there. In a chair, they squirm, twist, churn, wriggle, and jiggle. Hence insignificant difference between the active and inactive adolescent boys has shown in this study.

The finding of Social control shows that there is significant difference between the mean of thought control's sub factor social control of active and inactive Adolescent School Students. Social control refers generally to societal mechanisms or processes that regulate individual and group behaviour in an attempt to gain conformity and compliance to the rules of a given society, state, or social group. In our present study the mean score of social control for active students shows higher level it may be because of the socialization process which involve in sports participation showing its tremendous cardinal principles. Psychological among the children through sports participation is substantially affected by the roles of friendship. Infact children participate in sports to make new friends and to be with existing ones. In other words affiliation is an important participation motive the formation of peers and friends groups with regard to their psychological development (Maureen R. Weiss and Alan L Smith and Marc Theeboom). Sportsmanship and the development of positive character have long been explicit goals of school sports. A strong belief exists that sport programs have the power to promote the development of "...sportsmanlike behaviors, ethical decision-making skills, and a total curriculum for moral character development" (Stoll, 1995) and provide a social environment to acquire personal and social values and behaviors contributing to

good character and good citizenship (Arnold, 1984; Sage, 1998). The arena of sport can provide one of "the greatest opportunities for a student to learn honesty, integrity... and ethical behavior" or it can provide "one of the greatest opportunities in school for a youngster to learn how to be dishonest...or how to be hypocritical" (Sabock, 1985: 271). Sports have immense power to shape consciousness, values, and beliefs of athletes and to pass on selected aspects of the dominant culture" (Sage, 1998: 264). This digest discusses the formal and informal processes of moral character development, in light of the types of programs that have shown to improve moral character, sportsmanship, and fair play. "Character education refers to the deliberate and intentional activity of cultivating, modeling, and teaching moral growth and moral judgment" (Stoll, 2000: 3). The goal of this process is for individuals to build moral habits with a disposition to act upon moral judgment (Kohlberg, 1981). Moral character development is a combined lifelong formal and informal educational process (Stoll & Beller, 1999) with three interrelated dimensions: knowing, valuing, and doing the right thing (Lickona, 1989), with the result being moral character. So, from these all corroborated studies carried out by different researcher shows clear evidence in support with the present studies result where active student's social control level is higher.

It is learnt from the finding of Worry that Inactive Adolescent School Students showed higher Worry level in compare to active students. The reasons of this significant difference may be because of their nature of living style, it is quite comprehensive that those are the active sports persons they are well developed on all those mental aspects, so as to they accept any type of challenge during their sports competitions as well in their daily life which ultimately developed mental toughness, positive attitude, emotional balance and overcome all sorts of hurdles tactfully. In the counterparts the inactive students do not gets such opportunities to develop all those aforesaid aspects. As the proverb says that "Empty mind is the ghost workshop". Due to non participation I games and sports rarely share their well and woes with their peer groups. Hence this result occurs within this study is in agreement with the result of Laugesen and Nina (2000), Muris P and Meesters (1998).

The finding of Punishment shows that there is significant difference in the score of Thought Control's subfactor Punishment of Active and Inactive Adolescent School Students. Punishment is the practice of imposing something negative or unpleasant on a person or property, usually in response to disobedience, defiance, or behavior deemed morally wrong by individual. The reason the significant difference may be attributed to the fact that through the sports participation active adolescent might have developed self determination, self-efficacy, casual attribution, self restriction and understanding group dynamics by which they keep themselves away from the disobedience, defiance or behavior deemed morally wrong on the contrary the active adolescent students do not get such scopes / opportunities to realize all these loopholes or to develop all those aforesaid traits. Hence the significant difference is shown by this study.

The finding of Re-appraisal shows that there is a significant difference in the score of Thought Control's subfactor Re-Appraisal of Active and Inactive Adolescent School Students. According to findings active adolescent students showed significantly higher level of reappraisal compared to the inactive adolescent students it may be because the active persons gets opportunity to rectify/ modify or make necessary correct in their behaviour whenever commit

mistakes during the playing conditions as well as in the daily living conditions. Through the self regulation or actualization individual tries to develop his attitudes in the positive way so as to accept any criticism with the sportsman spirit. By doing so active adolescent improve this aspects of thought control. Therefore in the findings also a significant difference has occurred. This result is support with the findings of Lea Rood, Jeffery Roelofs, Susan M. Bagels (2012).

The finding of Academic achievement shows that there is a significant difference in the score of Academic Achievement of Active and Inactive Adolescent School Students. Where in this study it has been found that the mean score of active student's Academic Achievement shows higher, which directly signifying that the participation in games and sports ameliorate the academic level, though the role of sport participation for high school students in the educational process has been a topic of debate for decades. Supporters of high school sport programs argue that sport participation improves students' achievement motivation (Casey, 1989; Parker & Johnson, 1981), improves students' grades, keeps them in school, raises their educational aspirations (Melnick, Sabo, & Vanfossen, 1992), helps them appreciate health, exercise and fitness, helps them learn about themselves and learn to handle adversity, and helps them experience team work and sportsmanship (Rasmussen, 1999-2000). The findings of a group of studies indicated that participation in sports increased students' overall interest and commitment to schooling as well as their engagement in more student-teacher contact, more positive attitudes about schooling, more parent-school contact (Crain, 1981; Trent & Braddock, 1992). Highly active individuals were significantly more optimistic and experienced greater self-efficacy than those non-active or low-active people. Similar findings were also reported by Bandura (1986), Hamid (1990), Scheier and Carver (1987), and Thayer (1987). In a longitudinal study, Manners and Smart (1995) noted that athletic team participation was related to identity foreclosure, particularly for males. With respect to whether students' participation in sport activities was beneficial to their academic goals, Marsh (1988) reported that participation in too many activities produced diminishing returns. Sport involvement was not necessarily detrimental to academic pursuits. Influence of sport involvement was particularly strong for boys who were not otherwise predisposed to attending college. Sport involvement tended to engender high-perceived peer status, which in turn stimulated a desire for further status acquisition through college attendance.

12 minutes run and walk showed significantly higher level of cardiovascular endurance compared to the inactive students. The significant difference has occurred may be attributed to the fact that regular sports participation leads to develop all physiological parameters like cardiac hypertrophy, increased stroke volume, increased cardiac output, decreased heart rate, increased capillary density, increased transportation of gases, increased vital capacity, increased ventilator efficiency because increased the demand of energy by the active muscle involved during the activity. It is a matter of fact that until unless the demand is satisfied organism keeps on restlessness, hence different system developed optimally to supply the necessary energy, oxygen etc. through which a permanent changes in the cardio respiratory and energy system might have occurred due to regular systematic sports participation. Based on much research evidence now it has proved that Physical activity and fitness are related to a large number of health outcomes (Freitas, 2007; Philippaerts, 2006). Indeed, during childhood and adolescence regular Physical Activity is

associated with improvement in physiological health and being promoted as an objective for disease prevention (Verstraete, 2007; Vaeyens, 2006). Therefore active adolescent students have shown the significantly greater cardiovascular endurance while compared with the inactive adolescent students

The score of Knee Bent Sits Ups of Active and Inactive Adolescent School Students. Active Adolescent School Students shows higher muscular endurance than the inactive students. The significant difference occurred in the muscular endurance may be because of regular sports participation leads to increase muscular capillarization, increase O2 uptake capacity, increased myoglobin content and increased the aerobic capacity to delay the onset of fatigue. Therefore the finding of the study showed result in this study

There is no significant mean difference between the active and inactive adolescent students in chin-up performance. It may be a reason of less development of upper muscle strength by both the active and inactive adolescent students. Lack of participation by the inactive students in physical activities might have not developed the shoulder strength. In the case of active adolescent who regularly used to undergo various physical activities they might have not developed shoulder strength due to the nature of activity. In activities such as Mountaineering, climbing, and cross-country skiing, cricket, baseball, badminton, gymnastic etc. good muscular endurance and strength of the arms and shoulders are beneficial for climbing. Research has shown that success in climbing performance is best explained by trainable variables such as shoulder strength and endurance, forearm strength and endurance, and maximum grip strength, rather than anthropometric characteristics such as height and weight (Giles, Rhodes, & Taunton, 2006; Mermier, Janot, Parker, & Swan, 2000).
Games and sports like football, kho-kho, running events etc. where upper arm and shoulder muscle groups are rarely involved, accordingly shoulder strength development did not take place with them. Hence the mean score of chin ups of active students is nearly to the mean score of inactive students therefore insignificant difference between the two groups of adolescent students occurred in the finding.

The score of Sits and Reach Test of Active and Inactive Adolescent School Students. It may be because of regular participation in physical activities might have increased the mobility of joints, increased secretion of synovial fluid so as to joints move freely, increased muscular stretchibility increased the flexibility of ligaments and tendons, on the contrary inactive students might have developed the joint more rigid due to lack of participation I sports activities (Wilmore jack H., 1977). Hence such finding occurred in this study

The finding of Fat weight shows that there is a significant difference in the score of Fat Weight of Active and Inactive Adolescent School Students. It may be because of the regular exercise program on sports participation leads to a reduction in both the no. and size of fat cells. It is quite comprehensive that to perform sports activities or exercises we are solely depended upon energy what we got from the carbohydrates and fat that are stored in the muscle cells as well as in the liver. As we know that main source of energy for muscular contraction is adenosine triphosphate, once it breaks down immediately energy is liberated and help for muscular contraction by which movement of the body is performed. But ATP has to be resynthesized and that only possible through the breakdown of carbohydrate (glycogen) and fat (fatty acid). In the initial stage for resynthesizing ATP carbohydrate act as the main source but when

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carbohydrate fails to supply energy then the fats starts to serve energy for resynthesizing ATP. By doing so the stored fats are burnt and decreased the amount of adipose tissue. Hence fat weight is decreased within the active adolescent students therefore the result are shown the less amount of fat percentage in the active adolescent than the inactive adolescent students. The finding of this study is in agreement with the result of (Parsons et al., 1999; Laitinen et al., 2001)

The finding of Lean body weight shows that there is a significant difference in the score of Lean Body Weight of Active and Inactive Adolescent School Students. Physical activity in youth can contribute to increased peak bone mass. Weight-bearing activities produce high-impact loading that stimulates bone formation effectively (Vuori, 2001.) participation in Physical Activities increases in the myofibrils and the diameter of the myofibril. Lean body mass incorporate the concept that there is an essential level of lipids as part of the structural and physiological integrity of the membrane and nerve tissue, which is distinguishable from depot, or storage, fat. Fat free weight is considered to be positively related to athletic performance, in certain events because a large Fat Free Weight FFW component means a large muscle mass and thus greater force potential. Athletes generally have a greater fat free weight than do non-athletes. The smaller FFW of the latter is a disadvantage in many sports (Richard W. Bowers & Edward L. Fox, 1992).

Conclusions

Within the limitations of the study and on the basis of statistical findings the following conclusions are drawn.

Active Adolescent School Students showed higher level of well-being as compared to inactive adolescent students because the finding revealed greater possible depression with the inactive adolescent students which indicates low level of wellbeing. There was significant difference in Thought Control's sub factor of social control, punishment, worry and reappraisal of active and inactive adolescent school students. Active students showed higher level of social control and reappraisal because of their active participation in games and sports, again the inactive students showed higher level of punishment and worry because of their non-participation in games and sports. Significant difference was found in Academic

Achievement between the active and inactive adolescent school students, where active students showed higher level of Academic Achievement. Active Adolescent School Students showed higher level of cardiovascular endurance as compared to inactive adolescent students. Active Adolescent School Students showed significantly higher flexibility as compared to inactive adolescent. Muscular strength (chin ups) of Active and Inactive Adolescent School students did not show significant difference between the two groups. There was significant difference in the fat weight between the Active and Inactive Adolescent School Students. Inactive students showed higher fat weight than the active one. Active Adolescent School Students showed significantly higher Lean Body Weight compared to inactive adolescent school students.

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Research Paper

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Changes in leisure industry in Europe

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Abstract

The importance of leisure industries in Europe was and is still today a well-known aspect. Leisure is connected with fun and personal development. That's why the main task of progress is creating an easier, friendlier environment for human development; one in which people can have external and internal inputs.

Leisure industry in Europe is looking for new methods which attract more and more people to use leisure institutions, equipment and/or programs. The strongest platforms are the recreation business and tourism which attracted 456 million individuals (UNWTO, 2010) in 2009 to the continent.

Historically, the goal of leisure development was to first demonstrate the power of emperors, and later the results of technical development. Huge luxurious buildings were built. Attractive art and new types of entertainment have changed the lifestyle of citizens.

In innovation technology, there are two directions: how can leisure providers develop existing leisure offers, and what kind of new technologies are needed to reach a higher level of quality of life.

In our study, we used figures, statistics and graphs, disseminated in recent

years, which reveal some complementary aspects relating to leisure economy. We collected data and analyzed successful and heavily visited tourism attractions across Europe like the Eiffel Tower, the British Parliament, and the Zoo in Berlin as well as events with the most spectators (sport competitions, festivals). We analyzed the trends of how industry reacted to the changing lifestyle of European citizens, what kind of products they brought on the market, and how many new jobs were created in the leisure industry.

Keywords: leisure, industry, Europe

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Introduction

In European history, the goal of the cultural development was first to demonstrate the power of the rulers, building castles, churches, and to decorate their own environment with parks and lavish interior designs. Later on, with technical and economic development, more and more people wanted to emulate the lifestyle of the aristocrats and they were looking for the best examples.

The settlements were formed by architects and artists dominating the local landscapes, imparting style, and with a desire to create something unique. The results made the environments more liveable and aesthetically appealing to citizens and visitors alike. For example, even today the most visited buildings in the world are the Eiffel Tower in Paris, St. Peter's Cathedral in Rome, or the Parliament in London.

The 19th century saw great changes in popular leisure patterns in Europe. This was especially true in the UK, as leisure became part of a fundamental transformation of the culture of the industrial working class. In urban areas, the advent of new types of entertainment changed the lifestyle of citizens. Casinos, theme parks, sport and recreation centers etc. were built to entertain local populations. Further, more and more theatres and cinemas were built in the cities.

In the decades from the 1830s, the antiquated pre-industrial culture broke up, leaving behind the traditional forms of recreation. A new culture, better adapted to modern urban industrial society, took the pre-industrial culture's place by the late 1800s. This allowed the British working class to settle into a new way of life in which they enjoyed popular forms of recreation such as music halls, association football and seaside holidays (Bailey, 1987).

The industry invariably reacted quickly to increasing benefits to the working class. This was especially true for free time and vacations. Spending money on recreation and leisure is discretionary, varying directly with disposable income allowing the leisure industry sector to react quickly recessionary pressures. For this reason, expenditure in the sector is highest where consumers have time and money to devote to leisure. Key drivers include increasingly affordable travel (tourism), rising disposable incomes and higher lifestyle aspirations. Furthermore, tremendous opportunities exist within the leisure industry in countries that are seeing increases in disposable income such as Eastern Europe, where the sector is still developing.

This sector is sensible to the economical changes. The low-fare airlines in Europe not only greatly increased the number of travellers to the most popular sites but also to many of the less known European destinations. However, the

increasing petrol prices are shortening (especially in the financial crisis) the distances travelled to tourism destinations. Leisure and recreation spending increased in 2010 by 7.5%, according to figures published by Visa Europe (Insley, 2010).

Literature review

The leisure industry is fuelled by an expansion of people's leisure time and spending. The sector is a heterogeneous group of industries, focusing on fulfilling the expectations of individuals. It determines the human lifestyle in different ways. The consumers are looking for qualitative products, which influence their wellbeing and health.

The leisure industry is connected to the creative industries addressing a range of economic activities and concerned with the generation or exploitation of knowledge and information. These creative industries may also be referred to as cultural industries especially in Europe (Hesmondhalgh, 2002: 14) or the creative economy (Howkins, 2001). Cultural industries include industries that focus on cultural tourism and heritage, museums and libraries, sports and outdoor activities, and a variety of 'way of life' activities that vary in range from local animal shows to a host of hobbyist concerns.

The development of leisure industry was influenced by increasing free time available to individuals parallel to the economic growth. In the early 1970s, hours worked per person were approximately equal in the United States and in Western Europe. Today, the average hours worked in Europe is about 50 percent of the average hours worked per week in the United States. Americans average 25.1 working hours per person of working age; Italians, 16.7; French, 18.0; and Germans, 18.7 (Gertler-Rogoff, 2005). The average employed French citizen works 40.5 weeks per year; the average Swede, 35.4. It means European nations have more free time for leisure than North Americans.

The purpose of the leisure industry research was to follow the development of the production and the service quality in leisure areas. In the 1990's a SERVQUAL model was applied to six research sites; theatre, art gallery, museum, leisure centre, golf course and amusement park. The model gave numerical values over five dimensions of service delivery quality, from the perspective of both consumers and leisure industry providers (Williams, 1998).

In Spain, Garcia et al. (2003) have been analyzing the economic dimension of the Culture and Leisure Industry from three complementary perspectives: national, sectorial and regional. Particular emphasis was placed on determining the value added by this industry and its contribution to the Gross Domestic Product – 4.5% – as well as showing its level of employment both in absolute terms and as a percentage of the number of employees in the economy – 7.8%. The study demonstrates that the cultural sector is productive, and actively generating wealth in Spain. However, a high degree of heterogeneity is found at both the sectoral and regional levels. Economic activity is led by Performing, Musical and Audiovisual Arts (mainly Television) and Publishing and Printing, which jointly account for about 70% of sales and gross value added. Further, it is concentrated in similar proportions in developed regions specialized in service industries, Madrid and Catalonia, where most culture and leisure activities are available.

Goals and methods of the study

In our study, we searched for data on the key indicators of leisure and the reaction on 3 dominating sectors of leisure industry: tourism, sport, mental leisure.

Our goals were to determine:

- How much potential Europe has in leisure industry?
- What kind of offers the Europeans are looking for?
- What is happening now on the European leisure market?

To answer these questions, we have been analyzing and evaluating statistical data published in research papers, on official websites of the EC, or other international or national organizations.

Results

Presently, European society's cultural industry is viewed as an essential resource that not only provides work but also develops cultural harmony within the EU (Richards, 2001). The most dynamic factors in the last decade were the music and design sector (Graph 1), and the most employment opportunities were available in the art sector (in UK from 101,570 freelancers work 46%).

MARKET	EU		GER		τ	JK	FRA	
	2008 (\$)	annual growth rate 2004/08 %	2008 (\$)	annual growth rate 2004/08 %	2008 (\$)	annual growth rate 2004/08 %	2008 (\$)	annual growth rate 2004/08 %
Hotels and motels in- dustry	208.6 bill	5.3%	40.5 bill.	2.9%	35 bill.	5.6%	35.7 bill.	4%
Games con- soles market	9.8 bill.	21.8%	1,414.2 mill.	27.9%	1,932.8 mill.	4.3%	1,890.5 mill.	29.1%
Games software market	15.6 bill.	19.2%	2.7 bill.	16%	5.5 bill.	24.9%	2.5 bill.	21.6%
Sports equipment market	21.2 bill.	2.3%	3.3 bill.	1.2%	4.6 bill.	2.4%	4.4 bill.	1.1%
Toys & games mar- ket	21.1 bill.	2.7%	3.3 bill.	0.5%	6.1 bill.	3.7%	3.8 bill.	0.3%
Casinos & gaming sec- tor	101.8 bill	8.5%	21.5 bill	9.9%	20.1 bill.	6.3%	13.3 bill.	3.6%

 Table 1: Leisure industry development in Europe (EC, 2009)

Tourism industry

Europe plays a leading role in the tourism market. In regards to the statistics of tourism arrivals, 6 of the 10 most successful countries are from Europe. The most visited countries in 2010 in Europe were France (76.8), Spain (52.2 mill.) and Italy (43.2 mill.) (UNWTO, 2010). Behind the tourism industry are strong hotel and gastronomy sectors. As shown in table 3, the three leading countries have the most hotels and restaurants, which is 52% of the total numbers of other EU region. Additionally, for example, in Spain, beside the 261,671 hotels and restaurants are 328,000 cafeterias (1/134 inhabitants).

The success is also connected to other elements including:

- The rich cultural heritage according to the EC statistics Europe have appr. 200.000 protected monuments and 2.5 million buildings of historical interests (EC, 1998). Many of them must be saved at all cost, because they attract many tourists.
- New attractions were introduced in 2000 only in UK 600 million euros were invested in new attractions (Richards, 2001)
- International hotel chains are involved in the market more than 14,700 hotels in Europe were operated by major international chains, which is approximately 34% of the total hotel supply (Blanco et al., 2010).
- New sales methods were introduced, which on the tourism market online travel market could reach EUR 24.9 billion or 10.0% of the market by 2010.
- New tourism products, like sport tourism help to extend the seasonal pressure. The number of hiking and biking tourism offerings has increased in the last years.

Table 2: Number of enterprises, employment and turnover in hotel and restaurants by member states in 2001 (source: www.eds-destatis.de)

	Enterprises		Employ	ment	Turn	over	Pers. Em- ployed	
Country	Number	% of total	Employment	% of total	Euro mill.	% of total	per enter- prise	
BE	40217	2,9	157699	2,1	8627	2,5	3,92	
CZ	42580	3,0	162653	2,1	2684	0,8	3,82	
DK	13442	1,0	94597	1,2	4405	1,3	7,04	

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DE	172999	12,3	1082339	14,3	42001	12,4	6,26
EE	1338	0,1	13268	0,2	215	0,1	9,92
ES	261671	18,6	1073666	14,2	41393	12,2	4,10
FR	207326	14,7	796433	10,5	51826	15,3	3,84
IE	13662	1,0	125187	1,7	6592	1,9	9,16
IT	255739	18,2	904973	11,9	47996	14,2	3,54
CY	7103	0,5	33270	0,4	1592	0,5	4,68
LV	1876	0,1	17018	0,2	212	0,1	9,07
LT	2906	0,2	24053	0,3	199	0,1	8,28
LU	2570	0,2	12643	0,2	862	0,3	4,92
HU	32121	2,3	111287	1,5	1766	0,5	3,46
MT	2135	0,2	17080	0,2	497	0,1	8,00
NL	39740	2,8	299340	3,9	14302	4,2	7,53
AT	38679	2,7	211670	2,8	10512	3,1	5,47
PL	51645	3,7	200232	2,6	3085	0,9	3,88
PT	62083	4,4	239142	3,2	7021	2,1	3,85
SI	6056	0,4	27842	0,4	794	0,2	4,60
SK	1161	0,1	20482	0,3	254	0,1	17,64
FI	10514	0,7	52939	0,7	4275	1,3	5,04
SE	21383	1,5	109436	1,4	7250	2,1	5,12
UK	119195	8,5	1792138	23,6	80244	23,7	15,04
EU-15	1259377	89,4	6952336	91,7	327126	96,7	5,52
EU-25	1408298	298,0	7759521	100,0	338422	100,0	5,38

Active leisure (sport) industry

Sports became one of the European Union's supporting, coordinating and supplementing competences with the ratification of the Lisbon Treaty in late 2009, setting in motion a process whereby individual Member States will be encouraged to implement evidence-based policies in order to improve their provision of sporting facilities and opportunities (EC, 2010b).

In Europe 40% of citizens say that they play sports at least once a week. The amount of sports that people play tends to decrease uniformly with age.

However, 22% respondents in the 70+ age group still play sports (Banhidi, 2011).

Europeans engage in physical exercise primarily in informal settings, such as parks or other outdoor environments (48%) or simply on the journey to and from work, school or the shops (31%). However, fitness centres (11%), clubs (11%) and sports centres (8%) are also popular, with an additional 8% exercising at work and 4% exercising at school or university. These results would seem to suggest that more people than ever are actively taking part in sports and leisure as a hobby, and also fuelling growth in the number of available jobs.

The strongest sport sector is the sporting goods industry, which is coordinated now with SGI Federation. One of the main goals of the organization is to promote free trade between European Member States. It represents some 1,800 companies with an annual turnover of more than 60 billion euros.

In Europe, strong sport brands were established, like Adidas, Puma, Fila, Lotto, and Lacoste etc. Furthermore, Adidas, famous for over 80 years, has been a part of the world of sports on every level, delivering state-of-the-art sports footwear, apparel and accessories. Today, with total net sales of 6.267 billion euros and net income of 260 million euros, Adidas-Salomon is a global leader in the sporting goods industry and offers the broadest portfolio of prod-ucts. Their products are available in virtually every country of the world. Their strategy is: "continuously strengthen their brands and products to improve their competitive position and financial performance" (www.ernstrade.com).

The company's share of the world market for sporting goods is estimated at around 15 %.

Another sporting sector expected to experience significant growth is the operation of fitness and recreational sports facilities featuring exercise, active physical fitness conditioning, recreational sports activities, organizing events, and sport tours (Banhidi-Leber, 2011). Firms are also involved in facilities management and fitness instruction which are targeted toward athletes, local citizens or tourists.

In the UK sport and recreation industry as a whole employs around 621,000 people. This includes those employed in the public, private and voluntary sectors. (Skills Active, 2009). There are a substantial number of volunteers working in sport and recreation. A significant proportion of Europeans (7%) say they volunteer to help local sports projects. In the UK, two million people commit at least one hour a week to volunteering in sports. In the UK, there are 3,000 private health clubs and over 2,500 leisure centers, which together employ over 45,000 staff. An additional 800 clubs are expected to open over the next few years in this growth industry (Skills Active, 2009).

In the sport industry, we also found regional differences in the development. Compared to the world development, Europe's potential is declining the most in sport apparel (-4%). In 2008, the growth of sport industry development in Europe stopped except for sport equipment, bike and accessory production (table 3).

	Popula- tion	Total sport	Sport Footwear	Sport Apparel	Sport Equip- ment	Bicycle & acces- sories
WORLD	1%	0%	0%	-1%	0%	4%
EUROPE	0%	-1%	0%	-4%	1%	2%
AMERICAS	1%	-1%	-3%	0%	-3%	2%
MIDDLE	2%	7%	8%	6%	6%	7%
EAST, AFRICA	2.70	7 70	0 70	070	070	7 70
ASIA	1%	4%	4%	1%	4%	6%

 Table 3: Changes of sport industry 2007/2008 (NPD Group, July 2009)

Creative and entertainment industries

1. The cultural industry

In Europe, the governmental support for culture varies with the degree of economic power (table 3). Most of the money spent for culture per capita/year is in Norway (488 euro), Sweden (236 euro) and Denmark (249 euro). It is not clear why, for example, Italian, UK or Greek governments spend less money than the EU average on culture in their own countries.

In 2006 1.67% of the total employees worked in the cultural sector. In the UK this number was 2.06, from which 85,441 people worked in the visitor attraction/museum industry (Britain Distribution of Employment by Type Category Survey, 2006).

Country	Govern- ment ex- penditure on culture per capi- ta: (euro)	Share of cultural workers in total em- ploy- ment: (%)	Share of self- employed in cultural em- ployment: (%)	Share of self- employed in total employ- ment(%):	Annual exp. per capita for recrea- tion and culture: (USD)	Cinema admis- sions per capi- ta/year: (times)	Internet pene- tration rate (%)
AUT	274	1,57	30,7	13,37	2431	2,2	73,4
BEL	-	1,43	13,68	14,79	1698	2,1	74,9
BUL	29,3	1,52	11,63	12,48	325	0,4	44,9
DEN	249,11	2,27	12,88	9,16	2003	2,4	85,8
CZ	96,9	1,7	21,6	16,46	1383	1,2	63,60
FIN	176,6	2,26	20,2	13,61	1868	1,3	83,70
GER	112,36	2,18	24,86	11,49	1071	1,8	79,60
GRE	32,04	1,16	17,97	35,72	999	1,1	44,00
HUN	56	1,80	15,52	12,48	886	1,1	61,70
FRA	197,2	1,70	16,96	10,91	1924	3,1	69
IRE	41,22	1,47	31,9	17,57	1516	4	69,10
ITA	117	1,07	37,78	24,96	1218	1,9	49,80
NETH	183	2,05	32,03	13,51	1998	1,7	89,70
NOR	487,73	2,63	20,8	8,08	2492	2,7	91,20
POL	50,68	1,39	14,57	22,73	613	1	58,80
POR	84,6	0,94	24,92	23,7	1049	1,5	48,60
ROM	-	0,75	7,8	32,78	300	0,3	36,30
SK	41,52	1,10	17,76	15,67	864	0,8	74,90
SLO	134,6	2,03	10,23	16,19	1210	1,4	63,40
SWE	235,97	2,34	23,21	10,68	2031	1,9	89,90
SWI	181,5	1,40	12,1	15,17	2135	2	73,70
UK	78,63	2,06	26,98	13,58	2724	2,8	83
Average	134,44	1,67	20,28	16,6	1488,09	1,76	68,59

Table 4: Cultural Industry in European countries (EU, 2006)

2. Media industry

In Europe, we know that new communication technology is more than keeping in touch with somebody. Most people buy new equipment because they want to be up to date, and the pressure by the technology manufacturers

and providers is intense. New technology allows us to make phone calls on laptops, play games on mobile phones and watch videos on games console. This has prompted much speculation about convergence on a single powerful device that can perform all of these functions (The Economist, 2011).

After the OECD research, individuals spent nearly twice as much money on telecommunications than on clothes and shoes (OECD, 2004). Telefónica, Spain's national incumbent operator bought O2, a wireless firm with networks in several European countries, for £17.7 billion (\$31.3 billion). NTL, Britain's cable operator, bought Virgin Mobile, a mobile operator, for £962m. Meanwhile, European operators paid around €100 billion for licenses to build new high-speed "third-generation" (3G) mobile networks.

In addition to present offers and incentives, operators around the world began building "next-generation networks" at vast expense. Verizon is spending over \$18 billion on its new network, and Britain's BT is spending £10 billion. These networks allow telecoms operators to offer television service in addition to voice calls and broadband internet access. Also, in Spain, technology plays a fundamental role in today's leisure habits. Net rating companies reported that the number of telecommunication web visitors has grown in 2006 by 28,2% compared to 2005, which translates to 1 out of 4 Spaniards (Losada, 2006).

In Europe the film industry plays an important role on the entertainment business. On average Europeans frequent the cinema 1.76 times per year. This indicates there is a strong interest in this market. For this sector, several networks exist in Europe. There is a European Cinema Research Forum, which

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has hosted the annual conference 8 times in Europe, along with publishing studies on popular European culture, films, running webcasts on Europe, and Films. There is also the Europa Cinemas network of 1,036 cinemas in 588 cities and 60 countries. It was founded in 1992 and is partly funded by the European Union MEDIA Programme and Euromed Audiovisual, the Council of Europe Eurimages fund as well as support from France's Ministry of Foreign and European Affairs and National Center of Cinematography and the moving image. The network provides operational and financial support to cinemas who commit to the screening of European films, increasing the circulation of European cinema and facilitating international projects and cooperation between cinemas.

Nowadays, quite a few cities host international film festivals (Berlin, Cannes, Dublin, Istanbul, Karlovy Vary, Krakow, Locarno, London, Moscow, Motovun, Rotterdam, Sarajevo, San Sebastian, Roma, Thessaloniki, and Venice), which demonstrates the importance of this particular aspect of the leisure sector.

For film distribution there also exists a network called the Cineuropa which coordinates 128 film distribution companies, and creates platform for film producers (6128 UK exist 1011 film production companies). For film industry education, an online platform was created to bring some of the most prestigious European cinema schools and universities together.

There is also an online consultancy service by the Film Financing and Development Information Bureau, which provides with clear and relevant answers to issues related to the financing of film project in Europe.

3. Betting and gambling industry

The importance of this sector shows that EC has developed a Green paper to address on-line and offline gambling, and opened a public consultancy on all public policy challenges and possible Single Market issues resulting from the rapid development of both illicit and unauthorized on-line gambling offers directed at citizens in the EU.

Internet gaming sector represented between $\notin 2$ billion and $\notin 3$ billion in GGRs from EU consumer expenditures in 2004, and is growing rapidly. The global remote and internet gaming industry is forecast to grow from about US\$9 billion ($\notin 7.5$ billion) in 2004 to US\$25 billion ($\notin 20.8$ billion) in 2010.

Commercial and tribal casinos generated about $\notin 7.5$ billion of GGRs, 15% of the EU total. Moreover, gaming machines generated GGRs of $\notin 9.7$ billion, 19% of the EU total. Lotteries were $\notin 23.0$ billion, 45% of the EU total. Betting services was $\notin 8.9$ billion, 17% of the EU total. Additionally, bingo services and charitable gambling, a relatively small component, generated $\notin 2.4$ billion, or 5% of the EU total.

By comparison, US casinos tend to be much more accessible than those in the EU; there are, for example, virtually no casinos in the United States with entrance fees, identification requirements, or dress codes, whereas such conditions are all more or less standard for European casinos. Many American casinos have substantial provision of – and capital investment in – non-gaming facilities, such as hotels, restaurants, retail outlets, spas, convention centres, entertainment venues, and outdoor recreational facilities such as golf courses, tennis courts and swimming pools. For the most part, these amenities are still not typical features associated with European casinos.

In the UK there were in excess of 140 casinos when the "Gambling Act 2005" came into operation on 1 September 2007. The new Act allows for an additional 17 casinos. There are 16,310 employees in the UK casino industry, 18,500 employed in bingo clubs and 22,000 in the gaming machine industry (Prospects, 2011). Betting on team sports has become an important service industry in many countries. For example, millions of Britons play the football pools every week. Additionally, the horseracing and breeding industry supports 88,000 jobs (British Horse Racing Authority, 2007).

Summary

In our study we analyzed some statistical data focused on sectors of the leisure industry in Europe, which is connected to the production and service areas. The numbers show an increasing tendency, which are related to the technical development and citizen' s expectation for a higher quality of life. The leading sector in revenue generation is the tourism industry, which is based on the excellent management of the rich cultural heritage, infrastructure and attractions. The other strong sector is the sport industry, which offers products and services for all citizens interested in an active lifestyle.

The sport sector and related economic activity fields (such as the sporting goods industry) have a significant and growing impact on Europe's economy and society. According to an EU outcomes study, the share of sport in the EU

economy, expressed in Gross Value Added (GVA), is 1.76% while the share of sport in employment amounts to 2.12% (comparable to agriculture, forestry and fishing combined). Sport represents a labour-intensive growth industry which means that the expected growth in the sport industry is likely to lead to additional employment (EC, 2013).

Europe has tremendous untapped potential in the cultural and creative industries which can ultimately serve to create growth and jobs. Within the leisure industrial sectors are more graduate career opportunities than ever before (EC, 2010a). In July 2001 a 'Creative Europe' program was introduced and proposed to the EC. In this program, Europe must identify and invest in new sources of smart, sustainable and inclusive growth drivers to take up the baton. Much of European future prosperity will depend on how citizens apply their resources, knowledge and creative talent to spur innovation.

The European Commission, proposed a budget of $\notin 1.8$ billion for the 2014-2020 period ($\notin 900$ million for cinema and the audio-visual sector and $\notin 500$ million for culture). This would have been be an increase of 34% compared to the former programmes (Da Vinci, 2013).

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Research Paper

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Influence of basic ski-school in building attitudes toward alpine skiing as a leisure time recreational activity

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Abstract

The ski beginner's attitude toward skiing can potentially affect the success of basic alpine ski learning. This research aimed at determining the influence of alpine ski learning toward recreational alpine skiing. It included 136 alpine ski beginners (41 females and 95 males), with no previous knowledge of alpine skiing. The 26 item scale questionnaire was constructed for the purposes of this research, with both positive and negative statements toward skiing. The Likert's scale type of questionnaire was fulfilled twice during this research; initially before the start of alpine ski school, and finally at the end of the seven day alpine ski school. Out of 26 claims, positively directed differences between initial and final testing,

leading to attitude change were detected in 20 claims. Male participants included in this study had initially more positive attitude toward alpine skiing than female participants (Mean 106.6 vs. 100.7, respectively), but after completion of seven day alpine ski school program, both female and male participants attitude became more positive (Mean 110.7 vs. 109.4, respectively). Specifically, alpine ski school program exerted positive effect on attitude change toward mountain environment (p=0.01) and winter weather (p=0.04). Because of the sedentary way in which today's children and young people spend their free time, it is of utmost importance not only to interest them in physical activity in start, but also to maintain their interest in physical activity through formation of positive attitude toward it. Our results show how alpine ski program can positively affect ski beginner's attitude toward alpine skiing and how ski instructors, through simple questionnaire can identify potential obstacles and fears of their pupils in order to choose the appropriate approach of basic ski learning.

Keywords: attitudes, ski beginners, alpine skiing, physical activity

* * *

Introduction

From the general population perspective, staying in the mountains and participation in different snow sports in leisure time can positively affect the cardiovascular system (Burtscher et al., 2013) and motor abilities (Müller et al., 2011; Hydren et al., 2013). Recreational alpine skiing is a popular and world spread physical activity. The above is especially true of villages and towns that are near the mountains, but also the geographical areas which are plain and away. However, although the recreational skiing is extremely widespread and popular, in order to be realized it requires considerable financial resources. The most common way in which the recreational skiers are involved in this

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sport is for several days, usually seven-day stay in one of the many ski resorts. Precisely due the need to depart from the place of residence and invest financial resources, many people do not opt for alpine skiing as a form of recreational sport. It seems that the biggest barrier when selecting alpine skiing as a recreational physical activity for those who are not resident in the nearby ski resorts is just the relationship between investment funds and expected benefits for mental and physical health. The assumption is that the final decision on inclusion in this sport is defined by the individuals' attitude toward alpine skiing as a recreational physical activity. In psychology, attitude is defined as an acquired, relatively permanent and stable positive or negative evaluation of and response to an object, idea, or people (Aranson et al., 2005). Attitudes in general, including the attitude toward skiing consists of three components: cognitive, emotional and behavioral. Although each attitude consists of all three components, it is mainly based on one of the mentioned (Giddens, 2007). People generally form their attitudes with regard to the current knowledge of the environment in which they live, mainly impacted by: family, friends, peers, teachers, coaches, media and previous knowledge and experience (Bohner & Wänke, 2002). When it comes to alpine skiing, cognitive attitudes are based on current knowledge and belief of the person biased by the benefits which alpine skiing as a recreational physical activity offers. Emotional attitude is based on feelings or assumption of enjoyment in alpine skiing as a recreational physical activity, while attitude based on the behavior when it comes to ski beginners refers to the one's intention to involve in alpine skiing. Attitudes are not inborn, they are rather formed during lifetime, and once formed they are not to be changed readily especially while functional and motivational basis on which they are formed persist (Aranson et al., 2005; Myers, 2005). Person's

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attitude toward new sport activity is mainly based on the information he or she is exposed to. Each new situation in which the man is, can affect strengthening or changing their attitude toward some kind of physical activity. Thus, a person with no experience in alpine skiing can have a certain attitude toward it, but after trying to ski can either remain at his/her attitude or can change it. Alpine skiing is an extremely specific motor activity, which takes place in the changing mountain conditions during the winter months, so it is expected that the attitude toward skiing can be influenced by other factors that are not directly related to the sport, but also to the mountain environment in which it takes place. Some studies have been carried out to determine the attitude toward a sport that could then be linked to the success of learning that particular sport (Vlašić, 2010). The aim of this study was to determine the impact of the ski beginning learning process on the attitude change toward recreational level skiing.

Method

This research included 136 alpine ski beginners (41 females and 95 males; age 21.7 ± 1.31 years). Participants' attitudes toward alpine skiing were assessed through the 26-item questionnaire related to emotions and beliefs associated with alpine skiing. The questionnaire consists of 9 claims which articulate positive attitude and 17 claims which express negative attitude toward this activity (Table 1). It was constructed to assess the young people's attitude to-ward winter vacation, where they can learn alpine skiing, as well as to assess the attitude toward alpine skiing in general. Some questions related to possible

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effects alpine skiing has on health, then to the representation of alpine skiing in the media as well as on opportunities for practicing this sport at recreational level. Each participant was asked to choose one of five offered statements for each tested item on Likert's scale of five levels: 1. I totally disagree, 2. I do not agree; 3. I do not care; 4. I agree; 5. I completely agree. Overall result of the scale was calculated as a simple sum of results in claims (after inversely scaling of negative particles), in a manner that higher score suggests more positive attitude. Additionally, in order to detect which statements about alpine skiing are the most likely to influence the final attitude toward this leisure activity, groups of questions were formed (winter and coldness, fear of injury, alpine skiing as a sport and physical activity, mountains).

Table 1: Twenty six item scale for evaluation of attitude toward alpine skiing before the beginning of alpine ski school (initial testing), and after the end of seven-day alpine ski school (final testing)

Ν	Claims
1	I don't like skiing because I fear of heights.
2	I don't like skiing because during winter time I prefer being in a confined space.
3	I like thrill, so I like skiing.
4	Only by watching skiing competitions I wished to be engaged in alpine skiing.
5	I would like to go regularly to alpine skiing/winter vacation with my family.
6	I don't want to learn alpine skiing out of fear of being worse than my colleagues.
7	I would like to become a ski instructor.
8	I would like my kids to be good alpine skiers.
9	I don't like skiing because I fear of avalanches.
10	I don't like skiing because I fear of injuries that would unable participation in my sport.
11	I love the joys of winter so I like skiing
12	I like skiing because it makes the adrenalin rise.
13	I don't like skiing because it takes place in unstable winter conditions.
14	I don't like skiing because of the discomfort caused by the cold.

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15	I don't like skiing, because I can't stand staying at high altitude.
16	I don't like skiing because of the feeling of uncertainty when using the ski lifts.
17	I don't like skiing because of fear of fall on ski slopes.
18	I don't like skiing because I fear of solar radiation.
19	Skiing is a fun activity.
20	Fear of the ice surface distances me from skiing.
21	I don't like skiing because I fear of a collision with other skiers.
22	If I didn't have to go to skiing during my university education I would never go skiing.
23	Exposure to wind on the ski slopes makes me not like skiing.
24	Improvement of ski techniques is more important to me than "partying" at skiing.
25	I don't like skiing because of fear of injuries.
26	It scares me that I will be hurt in a fall with skis or poles.

Metric characteristics of the 26 claims were tested and it was determined that they evaluated the participants' attitude toward alpine skiing (Cigrovski et al., 2012). Data collection was anonymous, but each participant was assigned with a number so initial and final test results could be compared. After initial data collection was done, all participants entered a ski school program through which basic technique of alpine skiing was learned. The participants had the same conditions during learning, considering: the size of the group (10 participants pro group), 4 hours of learning and 2 hours of training daily, ski equipment, ski terrains, ski center, quality and education level of the teachers and duration of the ski school. After ski learning program finished all participants were asked to once again fulfil the same questionnaire. Time period between the two questionnaires was three months, in order to determine difference between two testing results within each individual answer descriptive statistics

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and chi-square test were used. Additionally, univariate analysis of variance has been applied in order to detect differences between initial and final score of thematically formed groups of questions regarding different aspects relating to alpine skiing. Statistical package for data processing "SPSS for Windows 17.0" was used. The level of significance in this study was considered statistically significant if it is less than or equal to 0.05.

Results

Table 2 shows basic descriptive parameters of the tested sample and its subgroups, while distributions of results of the both initial and final tests are presented in Figure 1.

Crown	N	Sum		Mean		SD		Min		Max	
Group	1	IN	FIN	IN	FIN	IN	FIN	IN	FIN IN	FIN	
All partici- pants	136	14258	15289	104.8	112.4	14.4	14.4	70	62	130	130
Male	95	10131	10802	106.6	113.7	14.6	13.7	70	62	130	130
Female	41	4127	4487	100.7	109.4	13.5	15.7	71	69	128	130

Table 2: Results of descriptive statistics

N = number; IN = initial testing; FIN = final testing; SD = standard deviation



Figure 1: Distribution of the results at two time points - before and after alpine ski school compared to Gauss distribution

Figure 2 graphically shows mean results of the questionnaire for assessment of the attitude toward alpine skiing and its standard deviations for female and male subgroups of participants at both initial and final testing.



IN – initial attitude evaluation; FIN – final attitude evaluation

Figure 2: Mean results and standard deviations of the female and male subgroups of participants at initial and final testing of the attitude toward alpine skiing

Initially, male participants had more positive attitude toward alpine skiing than female participants included in this research. After the participation in the alpine ski school program, both male and female participants' attitude toward alpine skiing became more positive, but once again male participants expressed greater enthusiasm toward recreational alpine skiing.

Table 3: Mean values of initial and final testing at the scale for evaluation of attitude toward alpine skiing and differences between frequencies of answers at initial and final test for each individual question calculated using Chi square test

ing om square test								
Ν	Mean	Mean	р					
1	3.17	3.63	0.00					
2	3.32	3.60	0.05					
3	3.87	4.24	0.00					
4	3.86	3.94	0.32					
5	4.07	4.37	0.03					
6	3.49	3.71	0.00					
7	3.01	3.60	0.00					
8	4.04	4.43	0.00					
9	3.51	3.79	0.00					
10	2.43	2.98	0.00					
11	4.02	4.10	0.19					
12	4.12	4.24	0.12					
13	3.29	3.42	0.00					
14	2.96	3.35	0.00					
15	3.49	3.71	0.00					
16	3.27	3.60	0.00					
17	3.10	3.26	0.16					
18	3.46	3.69	0.00					
19	4.29	4.62	0.00					

20	3.07	3.37	0.00
21	3.07	3.12	0.09
22	3.15	3.10	0.26
23	3.15	3.62	0.00
24	3.65	3.93	0.05
25	2.55	2.98	0.00
26	2.45	3.01	0.00

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*N – number of claim in the questionnaire (Table 1); IN – initial test; FIN – final test

Out of 26 claims which were included in the questionnaire, in frequencies of answers (intensity of improvement) on 20 individual claims Chi square test registered difference between initial and final test in direction of positive attitude change (Table 3).

In Table 4 are presented mean values at formed groups of questions concerning different aspects which might have a significant impact on developing attitude toward alpine skiing.

Crown of granting		test	Final	test	Б	р
Group of questions	Mean	SD	Mean	SD	r	P
Winter and coldness	3.35	0.15	3.62	0.21	6.23	0.04
Fear of injury	2.72	0.34	3.07	0.12	4.53	0.07
Alpine skiing as a sport and physical activity	3.76	0.41	4.02	0.34	2.43	0.14
Mountains	3.33	0.17	3.63	0.14	9.72	0.01

Table 4: Mean values of recorded answers at initial and final testing onthe scale for assessment of the attitude toward alpine skiing concerningdifferent groups of questions

IN – initial test; FIN – final test
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Alpine ski school program exerted positive effect on attitude change toward mountain environment (p=0.01) and winter weather (p=0.04, Table 4).

Discussion and conclusion

Numerous health problems of modern people, regardless of age, are associated with the unhealthy diet and sedentary lifestyle (WHO Consultation on obesity: Obesity: preventing and managing the global epidemic: report of a WHO consultation. 2000; Ruka et al., 2005). The magnitude of a problem is huge, while according to data from US registries, as many as 36.2 % of adults engage in no leisure-time physical activity and up to 34% of adult population is obese (U.S. Department of Health and Human Services, 2008). Physical activity, together with good nutrition, are essential parts of health and well-being and can help decrease a person's risk of developing chronic health conditions, such as hypertension, dyslipidaemia, diabetes, and cancer. Moreover, they are paramount for preventing physical condition deterioration. So, recommendation is to change eating habits and engage in recreational level sport during leisure time. However, due to a number of obligations and a faster pace of life, today's children as well as adults have considerably less free time to spend in physical activity, so while choosing a recreational level sport one has to have a positive attitude toward it. Choosing alpine skiing as a form of leisure time sport activity during winter holidays is certainly beneficial for human health (Burtscher et al., 2013). When selecting a specific sport as a way of using free time, one is among other reasons influenced by previous personal experience, but also on the recommendation of family or friends. If the experience in the

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given sport activity already exists either on recreational or competitive level, then new engagement depends on that experience, either positive or negative. Previously positive sporting experience helps when deciding on sport reengagement and likewise negative experience can lead to decision to evade sport activity. Important role during formation of attitude toward sport activity plays the environment in which the activity takes place and the trainers-i.e. experts involved in the process of training or activity learning. The purpose of our research was to collect the data related to winter leisure time, and skiing before and after the completion of alpine ski school program for beginners, and find the way how the ski instructors could implement this information into influencing attitude change in a positive direction. The specifics of alpine skiing are mountains in which the sport takes place during winter. Moreover, this can lead to giving up from engagement in alpine skiing, especially true for people with prejudices and alpine ski naïve individuals. The initial results obtained in this study corroborate with this statement, but also indicate the positive change of attitude toward mountain environment after learning basis of alpine skiing. When analyzing attitude of those who have never tried alpine skiing, then the financial aspect, which is necessary for the realization of the seven-day stay at a ski resort, must be considered. Participants in our study were young students who were ski beginners, and with no experience in alpine skiing, so it is possible to assume that one of the reasons why certain number of them did not engage in alpine skiing before is because the lack of financial resources. Also, a possible reason not to join in recreational alpine skiing is due to the fear of injury, fear of heights and discomfort due to cold weather, which is an integral part of the winter weather (Hébert-Losier & Holmberg, 2013). Analysis of the results of this study showed that participants after learning the basis of alpine

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skiing change their attitude about the fear of injury in a positive direction. Additionally, basic alpine ski program also influenced positive attitude change toward physical activity taking place in winter and cold weather, which can make outdoor activity uncomfortable. Because of the already mentioned ways in which today's children and young people spend their free time, it is of utmost importance not only to interest them in physical activity in start, but also to maintain their interest in physical activity through formation of positive attitude toward it. Identifying attitudes before engaging in certain physical activity through feedback from potential users could help trainers in choosing best approach for teaching basics of sport activity. Moreover, identifying obstacles not necessarily related to the sport activity itself but conditions in which the activity takes place could bring closer the reasons why someone is reluctant to engage in certain sport. Equally important information can be obtained upon completion of program of physical activity. Then it is possible to determine how and in what way people are happy with choosing how to use their free time. Such information greatly assists ski instructors, teachers who create and implement programs for adopting ski knowledge. As this study included interview data from before alpine ski school and upon the completion of basic alpine ski school program, it is possible for each participant to determine the possible positive or negative change in attitude toward alpine skiing as an effect of alpine ski school. Presented results indicate the significant change between initial and final data in the twenty of the twenty-six claims by which subjects were tested. Identified changes are probably due to: the mountain environment in which participants adopted basis of alpine skiing, the attractiveness of alpine skiing as a recreational activity, an interesting and easily acceptable learning program and loss of fear of injury due to controlled envi-

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ronment in which ski school took place. To test people's attitude toward new sport activity it is important to have an easy and simple questionnaire, with good metric characteristics. Precisely such a questionnaire was designed and implemented in this study with the primary aim of establishing relations before and after learning the basis of alpine skiing. Based on information obtained before ski school start, teachers can identify potential obstacles and fears of people engaging in skiing, such as the fear of injury, fear of speed or height, discomfort from the cold, and adjust the ski school program or speed and means of learning new elements of alpine ski technique accordingly.

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A relationship among leisure activities and B.M.I of school students of Chandigarh city

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Abstract

In this study a very important aspect of life, leisure activities have been concerned with the BMI. The relationship was tested between leisure activity and BMI. For this study 150 students of Chandigarh, the city beautiful based school were selected as subjects and their height and weight were measured to measure their BMI and Godin Leisure-Time Exercise Questionnaire (1985) was used to collect data for Leisure activity and to measure the level of physical activity done in leisure activity. The result had shown significant relationship with r - 0.186, and P < 0.05. The result was significant but correlation was not as strong as the value was very less. Finally it can be concluded that both the value of one variable increases with increase in the value of second variable, so leisure activity must be performed in order to attain better health.

Keywords: Leisure activity, BMI, Health

* * *

Introduction

Leisure, or free time, is time spent away from business, work, and domestic work. It is also the periods of time before or after necessary activities such as eating, sleeping and, where it is compulsory, education. The distinction between leisure and unavoidable activities is loosely applied, i.e. people sometimes do work-oriented tasks for pleasure as well as for long-term utility. A distinction may also be drawn between free time and leisure. For example, Situationist International maintains that free time is illusory and rarely free; economic and social forces appropriate free time from the individual and sell it back to them as the commodity known as "leisure". Leisure studies are the academic discipline concerned with the study and analysis of leisure.

In today's world the youth is getting away from the physical activity, now a days the youth is interested in social networking sites and other comfortable entertainment ways like play stations, movies and television. Youth is involved in such activities during their leisure time which are leading them to many health related problems. Physical inactivity has been identified as the fourth leading risk factor for global mortality and the cause of approximately 6% of deaths globally (WHO, 2010b). Abundant evidence from observational studies shows that active men and women have lower rates of all-cause mortality, coronary heart disease, high blood pressure, stroke, type 2 diabetes, metabolic syndrome, colon cancer, breast cancer, and depression compared to less active people (Physical Activity Guidelines Advisory Committee, 2008). In order to improve health, adults should do at least 150 minutes of moderate or

75 min of vigorous aerobic physical activity per week and in addition, muscle strength training twice a week (WHO, 2010b). However, most people are insufficiently active, for example about 40% of Americans engaged in no leisure-time physical activity in 2006 (Physical Activity Guidelines Advisory Committee, 2008), while in Finland in 2009, under 50% of the population met the current recommendation of 150 minutes of moderate physical activity weekly, and only just over 10% when the additional two strength training sessions weekly were included (Helakorpi et al., 2010).

Nutrition and physical activities in India

Seventy eight percent of respondents reported insufficient intake of fruits and vegetables and 29 percent inadequate physical activity in India. Ninety percent of the respondents in West Bengal have insufficient intake of fruits and vegetables and 33 percent have inadequate physical activity. In India, 60 percent of the respondents have insufficient intake of fruits and vegetables. Respondents with insufficient intake of fruits and vegetables are higher for lower income quintiles compared to higher income quintile households and elderly compared to population of younger ages. The percent of respondents with inadequate physical activities rises with age of the respondents and income quintile if the household. Thirty nine percent of urban respondents and 27 percent of rural respondents have inadequate physical activities. Ninety percent have insufficient intake of fruits and vegetables and seventy percent have inadequate physical activities among the respondents in ages 60 and above. Information on the height and weight of the respondents was collected

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from those who knew their height and weight. For the population who reported their height and weight, the mean height of female and male respondents is 151 cm and 162 cm respectively. Nineteen percent of female and 13 percent of male respondents have a mean height less than the standard height. Thirty four percent of women in Assam and 26 percent of women in West Bengal have a mean height less than 145 cm. Twenty four percent of males and 29 percent of female respondents are below the standard body mass index weight of 18.5 kg/m2. About 10 percent of males and 13 percent of females have a body mass index weight more than 30.0 kg/m2. Overall, females compared to males, rural compared to urban, lower income quintile compared to higher income quintile and illiterates compared to educated respondents are in a disadvantageous position with respect to standard mean height and weight (World Health Survey 2003, India).

Physical activities

Physical activities refer to activities undertaken at work, around the home and garden, to get to and from places (i.e. for transport) and for recreation, fitness exercise or sport. Regular physical activity has a significant protective effect against ischaemic heart diseases, ischaemic stroke, type two diabetes mellitus, and breast-cancer and colon cancer. Emerging evidence indicates that physical activity is important in preserving the residual fraction once peripheral arterial disease and chronic airways disease have developed, increases sensitivity to insulin, raises HDL cholesterol levels and reduces blood pressure. In addition, recreational physical activity helps to reduce minor anxiety, depres-

sion and weight. The World Health Survey considers only activities meeting specific thresholds of intensity that were undertaken in the seven days preceding the survey. Overall in India, 29 percent of respondents were found with inadequate physical activity. West Bengal has a higher proportion of population with inadequate physical activity (33 percent) followed by Rajasthan with 30 percent. Assam has the lowest 20 percent of respondents with inadequate physical activities. Twenty four percent of males compared to 34 percent of females have reported inadequate physical activity is 39 percent in urban and 27 percent in rural areas. The proportion of respondents with insufficient physical activity increases with age of the respondent and income quintile (World Health Survey, 2003).

Moderate intensity physical activity: It refers to activities, which take moderate physical effort that make you breathe somewhat harder than normal. Examples include carrying light loads, bicycling at a regular pace or double tennis. Walking is not included in the question assessing moderate activity because another item assesses all types of walking separately. Moderate intensity activities require an energy expenditure of 3-6 METs. (World Health Survey 2003, India)

Health benefits of physical activity

The epidemiological evidence for the dose of physical activity thought to provide a health benefit should form the basis of the data requirement on the prevalence of physical activity and the identification of people whose health is

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at risk due to inactivity. The significant role of physical activity in preventing and treating a number of health conditions and injuries is now well established (Blair et al., 1996; Lee & Paffenbarger, 1997; Villeneuve et al., 1998).



Figure 1: Schematic illustration depicting the relationship between physical activity level defined in minutes of participation per week or energy expenditure, resulting from a dose response symposium, 2001 with Australian Physical Activity Guidelines for Adults threshold for health added (Bouchard, 2001).

Dose-response relationship

Physical activity is usually conceptualized in terms of:

- Frequency (sessions per week),
- Duration (minutes per week),
- Intensity (amount of energy expended)

and the context in which it is undertaken (leisure time, job-related, house work-house maintenance-caring for family, and transport). Only physical activity of specific intensity and duration confers a health benefit (Capersen et al., 1985; Egger et al., 1999; Bouchard, 2001). The precise dose-response relationship between physical activity and health, especially in regards to specific diseases and total physical activity across all domains (leisure time, job-related, house work-house maintenance-caring for family, and transport) is less well understood. A recent consensus paper resulting from a symposium on the dose response relationship between physical activity and health concluded that the relationship is most likely curvilinear, with the greatest health improvement occurring when a person moves from being sedentary (less than 100 minutes leisure time physical activity per week) or when a person moves from only participating in light physical activity (1-2.9 METS) to undertaking moderate intensity (3-5.9 METS) physical activity (Bouchard, 2001). Additional increases in physical activity result in additional health benefits (Bouchard, 2001). This relationship is depicted in Figure 1. Harm related to physical activity tends to predominantly occur in competitive sports and in untrained sedentary individuals who embark upon sudden vigorous activity (Powell et al., 1998).

Recreation, sport and leisure-time physical activity

The reason why the definition of 'sufficient' physical activity for general health relates only to leisure time physical activity and not to non-leisure time activities such as occupational or household physical activity are:

- The dose-response relationship between leisure-time physical activity and health is better established than that between non-leisure time activities and health status (Egger et al., 1999). While non-leisure time physical activity influences total energy expenditure and health outcomes the precise dose-response relationship and threshold for sufficient non-leisure time physical activity for general health is unknown. Therefore the threshold for sufficient leisure time physical activity for general health is useful as: a proxy measure for the relationship between physical activity and health status; as a benchmark for identifying people whose health is at risk due to inactivity; and as a health promotion message.
- Leisure time physical activity is of priority policy interest as a context for promoting activity because in general people can amend their leisure time but not their occupational and domestic physical activity. Most occupations in developed countries are sedentary, with the greatest opportunity for increasing leisure time physical activity being during leisure time (Morris & Crawford, 1958; Montoye et al., 1996; Egger et al., 1999). On average people have between 3-4 hours of leisure time a day depending on: number of hours a person works; split of household duties; travel time; number of dependents; and need for selfsufficiency (Stundl, 1977; Hanke et al., 1979).
- While questions on leisure time physical activity show adequate validity, questions on occupational physical activity, gardening, yard work and domestic work show poor validity (Ainsworth et al., 2000). Constitutional psychology is a theory, developed in the 1940s by American

psychologist WASiam Herbert Sheldon, associating body types with human temperament types. The body mass index (BMI), or Quetelet index, is a heuristic proxy for human body fat based on an individual's weight and height. BMI does not actually measure the percentage of body fat. It was devised between 1830 and 1850 by the Belgian polymath Adolphe Quetelet during the course of developing "social physics". Body mass index is defined as the individual's body mass divided by the square of his or her height. The formulae universally used in medicine produce a unit of measure of kg/m2. BMI can also be determined using a BMI chart, which displays BMI as a function of weight (horizontal axis) and height (vertical axis) using contour lines for different values of BMI or colors for different BMI categories.

$$BMI = \frac{mass(kg)}{(height(m))^2}$$

There are other researchers who had worked in this area; *Cheung Sin Tung (2008)* conducted a study to determine the attitudes of secondary school students who have an internet-use habit in Hong Kong towards LTPA participation, and examined the reason why some students are able to maintain regular participation in leisure-time physical activity whereas others fail. This study investigated secondary students' positive and negative outcome belief, normative belief, and constrains towards internet-use and LTPA participation. Qualitative research method, which included semi-structured interviews, was used for this study. The sample included 8 secondary students who have an internet-use habit in Hong Kong. They answered the questions from the investigators and expressed their own feeling about their leisure experiences. The

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data analysis was done by using the constant comparison technique (Glaser & Strauss, 1987) and typed in Excel. The result showed that there were both positive and negative attitudes of students towards LTPA participation. Waller and Katja (2011) conducted a study to find out if leisure-time physical activity (LTPA), adjusted for genetic factors and childhood environment, protects against mortality, type 2 diabetes and other chronic diseases and against increases in weight and waist circumference. All participants were selected from the large Finnish Twin Cohort, which included 12 069 twin pairs in 1975. To investigate the occurrence of type 2 diabetes (T2D), 20 487 individuals were selected who were free of diabetes and had data on LTPA and BMI in 1975. These individuals were divided into quintiles according to their LTPA MET index. T2D risk was assessed between 1.1.1976 and 31.12.2004. For the longterm discordance analyses, 146 from 5663 healthy adult twin pairs were identified as discordant for both intensity and volume of LTPA in 1975 and 1981. Mortality analyses were carried out between 1.1.1983 and 31.12.2004. Among the 146 pairs, 95 sets of twin pairs (76 DZ, 19 MZ) were alive and participated in a follow-up telephone interview in 2005 (mean age 58.5y, range 48-78). The interview included detailed questions on the continuation of LTPA, selfmeasured weight and waist circumference and occurrence of chronic disease. Paired tests (McNemar's test, t-test, conditional logistic regression, Cox proportional hazard model) were used in the statistical analyses. The paired type 2 diabetes analyses among the whole 1975 cohort showed that the BMI-adjusted hazard ratio for the active (quintiles II-V) compared to sedentary (quintile I) co-twins at follow-up was 0.54 (95% CI 0.37-0.78). Among the 146 LTPA discordant pairs, 24 co-twins (16 inactive and 8 active) had died by the end of 2004. The active co-twins had a reduced risk of all-cause mortality as social

class-adjusted HR was 0.39 (95 % CI 0.18 - 0.85). This was not found among the small number of MZ pairs. Among the 95 interviewed pairs, the risk of type 2 diabetes or glucose intolerance (OR=0.09, p=0.022) and incident elevated blood pressure (OR=0.46, p=0.039) was lower among the active cotwins. The active co-twins were more satisfied with their life at follow-up (p=0.047). In contrast, the active co-twins showed a tendency towards more sports-related injuries (OR=1.9, p=0.051). Within the subgroup of 42 pairs discordant for LTPA over 30 years, mean weight gain from 1975 through 2005 was 5.4 kg (95% CI 2.0-8.9, p=0.003) less and waist circumference 8.4 cm smaller (95% CI 4.0-12.7 cm, p<0.001) at follow-up among the active compared to inactive co-twins. Physical activity helps in maintaining overall health by decreasing the rate of weight gain, lowering waist circumference and reducing the risk for clinical T2D. However, genetic factors may play a role in explaining some of the associations between mortality, disease occurrence and physical activity, as some of the findings were clearer among the dizygotic than monozygotic twin pairs discordant for LTPA.

Method and procedure

Present study was survey study and it was conducted to determine the relation among leisure activity and BMI, among the school children of Chandigarh, the city beautiful, to further determine the value of leisure activities for better health.

- Selection of Subjects: A sample of 150 subjects ranging between 12 to 16 years of age and students of private Schools of Chandigarh, the city beautiful were taken as the subjects for the present study.
- Selection of Questionnaire: The Godin Leisure-Time Exercise Questionnaire (1985) was used for the purpose of measuring the score of leisure time activity of the subjects for the present study. And BMI was calculated by the height weight ratio of the subjects.
- Collection of data: The necessary data was collected by using the questionnaire and the height, weight of the subjects. The data was collected during the school timings with the coordination of the concerned school teachers.
- **Statistical Procedure:** The correlation between leisure activity and BMI scores was done by using Pearson product moment coefficient of correlation.

Results

The results of the data are presented in table 1 and table 2.

	Leisure Activity	BMI
Ν	150	150
Mean	83.07	21.41
Variance	310.53	15.64
Std. Dev.	17.62	3.95
Std. Err.	1.44	0.32

 Table 1: Summary of data

r	r ²	t	df	Р
0.186	0.0349	2.31	148	0.011

Table 2: Coefficient of Correlation and t value

The results shown in table 2 presents that there is a positive correlation between leisure activity and BMI of students with the $\mathbf{r} - 0.186$, but the relation is not very strong as the value is very less, still there is significant relation between the two variables as with P < 0.05. The value of one variable increases with increase in the value of second variable.

The results revealed that the students who were involved in leisure physical activities had normal BMI. In this study the average scores of both the variables prove this that both variables are significantly related to each other. It was found that the students who were not involved in leisure activities had higher BMI the normal.

Conclusion

The present study shows the relationship among physical activity and BMI. The students who perform physical activities during leisure time had better BMI. There was significant relation among the variables taken for this study, in today's lifestyle it is very important to involve the youth in physical activities during their leisure time. Leisure time and physical activities are the best related for better health. More and more youth is getting involved in nonphysical leisure activities and it is leading to the bad health of youth. In the World Health Survey 2003 it was mentioned that 29 percent Indians don't do adequate physical activity which is alarming. In today's situation the need of

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the hour is more and more facilities to involve the youth in leisure time physical activities. For which green areas must be developed for the youth where they can spend their leisure time doing physical activities. Most important is to educate the school teachers to teach the youth how they can spend their leisure time for better health. Leisure time physical activity camps must be organized by the institutions to motivate higher participation of youth in physical leisure activities, and we must encourage the active living. With respect to the relationship between the amount of time spent playing videogames and other leisure activities, we found that children who spent more time playing videogames also spent more time watching television, reading newspapers, reading comics, playing non organized sports, playing indoors, and working on the computer. The strong relationship established in our study between playing videogames and watching television links up with results of earlier research by Selnow (1984), so importance must be given to physical activities during spending leisure time.

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