

SELF-CONTROL THROUGH  
THE OUTDOOR EDUCATION PROGRAM

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## **ABSTRACT**

Physical Education programs that focus on the physical, social, mental, and emotional development such as found in Outdoor Education programs, might be implemented as a potential activity to improve emotional control. The purpose of this research is to investigate the effects of an Outdoor Education's Hiking program based on Experiential Learning method on emotional control, particularly on anger and anxiety control. Sixty two male and 16 female (separately analyzed) students from the Physical Education and Health Department at the Indonesia University of Education participated in this study. Subjects were divided into an experimental and a control group. The Anger Scale used comprised of 46 questions, a modification of the Clinical Anger Scale (CAS) developed by Snell et al (1995), while the Anxiety Scale consisted of 24 questions modified from The Liebowitz Social Anxiety Scale (LSAS) developed by Liebowitz. (1987). After four weeks intervention (12 sessions), results indicated that the Outdoor Education Hiking program has significant positive effects on the anger control level ( $p < 0.25$ ), and the anxiety control level ( $p < 0.05$ ), whereas the experimental group has significantly better results on the anxiety control levels ( $p < 0.05$ ) compared to the control group. It is recommended that Experiential Learning through the Outdoor Education Hiking program could be implemented as a method of controlling anger and anxiety.

Key Words: Outdoor Education, Experiential Learning, Hiking, Self-Control, Anger, Anxiety.

## **I. Introduction**

Anger and anxiety are part of the basic emotions which often overwhelm humans. According to Ekman (1994) in Goleman (1995:311), “Anger is the most dangerous emotion; some of the main problems destroying society these days involve anger run amok.” Thus also, anxiety will be stressful to one’s mentality and causes disorders such as, “phobias, obsessions and compulsions, panic attacks” (Goleman, 1995:66).

The role of physical education, with its emphasis the development of a physically, emotionally, mentally, and socially fit society is considered very important in general education (Bucher, 1979). In the learning process, physical education related to the cognitive, affective, and psychomotor domains (Bloom, 1956 in Bucher 1979). Even though the physical education scope is broad, physical education in Indonesia, based on the research done by the Central Study and Development Committee of the Physical Education Curriculum (CSDCPEC. 2007), the physical education curriculum orientation is restricted to an emphasis on achieving or mastery of formal skills of various sports (psychomotoric). Consequently, the scope of physical education is limited, into restricted programs introducing children to formal sports. According to CSDCPEC (2007), such tendencies are solely based on the curriculum, without considering an orientation and valid reference of values in Physical Education. All of this, according to CSDCPEC, mirrored the lack of comprehensive understanding towards the meaning and the part played by physical education in its basic principles and philosophy. CSDCPEC (2007) further stresses that, “We should begin planning proper programming of the Physical Education Curriculum for the future with the purpose of achieving an extrapolative result concerning the conditions and need of future societies, to enable them to play a strategic role in the effort to reconstruct the Indonesian society in the future.”

One type of experiential learning, which is very relevant to the nature of the environment, is outdoor education. According to Bucher (1979), in the future education will utilize experiential learning programs more and more, giving individuals more opportunities to apply their knowledge and experience. The three aspects of physical education introduced by Bloom and Krathwol (1956) are included in Outdoor Education experiences, which provide students with learning

activities about a particular situation (cognitive objective), the appreciation of learning experience (affective objective), and the emotional and skill aspects derived from participating in an outdoor experience (psychomotor objective). Bucher further stated the necessity to examine in terms of how its teaching can be enhanced through outdoor education. According to Priest (1997) in Taniguchi (2004:45), "Outdoor education creates events that put students into problem solving predicaments and the decisions they make impact them directly and usually quite quickly." Taniguchi (2004) was also of the opinion that, outdoor activities provide meaningful experiences for individual clients.

Hiking or walking in the outdoors are basic outdoor activities which can capture beautiful places anywhere. According to Oleson (2000), hiking is ". . . one of the best exercises there is, walking, with some of the most spectacular beauty to be found on our planet, nature." Nature's conditions which one has to face in hiking are various, such as narrow paths, savannahs, thorny bushes, slippery ground, rocks, rivers, steep climbs, downward slopes. To overcome these, an ability to think, to decide what to do, is required. The ability to think in such situations, if constantly trained on a regular basis, hopefully augment the brain's ability to think (neocortex) so that reason is more important when confronting emotional stress. Apart from that hiking in the outdoors demands physical and mental skills, courage, patience, caution, discipline, concentration, and teamwork among members of a group. Those are important elements in management of emotion.

According to Tice (1993) in Goleman (1995:63), an active exercise such as going for a long walk is considered a safer alternative to help someone managing angry feelings. Tice further explained that that this method helps to change the body's physiology from the high arousal of anger to a low-arousal state, whereas the nature of the activity can distract from whatever triggered the anger in a person. Oleson (2000) supported the notion in that challenging, peaceful, relaxing, and stress reducing experience could be obtained by hiking the wilderness. More specifically, Nelson (1994) convincingly stated that the changes in the brain waves which affect the level of relaxation and tranquility. Walking in the wilderness is a period of cooling down from an emotional temper tantrum and is also a very pleasant activity. Nature never fails in giving a

source of learning and enjoyment (White in the translation by Pasuhuk and friends, 2005:88) while It is hard for a person to stay angry when he or she is having a pleasant time (Zillmann in Goleman, 1995).

Through various theoretical and literal studies it is proven that outdoor educational programs provide meaningful learning experiences. These characteristics make outdoor education through a hiking program the most potential learning experience to help solve an individual's emotional problems. Therefore, the purpose of the present study was to observe, whether experiential learning through an outdoor hiking program can also have an affect on emotional experiences, particularly in controlling basic emotional anger and anxiety.

## **II. Methods**

### **1. Subjects**

Sixty two male and 16 female (separately analyzed) freshman students from the Physical Education and Health Department at the Indonesia University of Education participated in this study. Ages typically ranged from 18 to 20 years. Subjects were divided into two groups: an experimental group and a control group.

Anger and anxiety scale tests were used to measure the effects of the outdoor education hiking program on both groups. The tests were conducted on three consecutive occasions, a pre-test, a final test I, and a final test II. The last two tests were conducted in order to apprehend whether the effects on the control of anger and anxiety were still discernable.

### **2. Hiking program**

The research chose a 4 weeks Hiking Program with a three times hiking frequency in one week, alternated by one day's rest to provide sufficient recuperation time to the experimental group. To implement this program, hiking is done gradually, from the easiest and safest hiking, up to sufficiently severe and challenging hiking. During the activities, subjects were encouraged to enjoy, learn about nature and freely meditate on it with their own minds and feelings. During the trip, subjects were to study the experiential learning in the outdoors individually, for example view the panorama, breathe the fresh air, bathing by a waterfall and the like. Occasionally, there were times for rest at the most convenient locations to observe the beauty of nature and to meditate

on it individually. By arrival at their planned destination, subjects were allowed to rest longer, while preparing their physical and mental conditions for the return hike to their original point of departure.

### 3. Measures

The Anger Scale used comprised of 46 questions, a modification of the Clinical Anger Scale (CAS) developed by Snell et al (1995) with reliability coefficients .907, while the Anxiety Scale consisted of 24 questions modified from The Liebowitz Social Anxiety Scale (LSAS) developed by Liebowitz. (1987) with a reliability coefficients .870.

### 4. Statistical Analysis

The data of this study was computed by the standard deviation and average of measuring value using SPSS/PC 12.0 Pared t-test to compare data before and after the intervention and independent t-test ( $p < 0.25$ ,  $p < 0.10$ ,  $p < 0.05$ ) to investigate the difference between groups.

## III. Results

The analysis on the effect of the hiking program on male's anger control was as follows:

Explanation	Post Test I	Post Test II	t-test I – t-test II
Experimental group	0.18 ns	1.15 sig.	0.55ns
Control group	0.29ns	0.53ns	0.17ns
t-test Exp-Control	0.03ns	0.45ns	-----

t value 0.25 = 0.683

The analysis on the effect of the hiking program on female's anger control were as follows:

Explanation	Post Test I	Post Test II	t-test I – t-test II
Experimental group	0.95sig	0.39ns	0.23ns
Control group	-0.98ns	0.60ns	-0.22ns
t-test Exp-Control	0.28ns	0.08ns	-----

t value 0.25 = 0.711

The analysis on the effect of the hiking program on male's anxiety control were as follows:

Explanation	Post Test I	Post Test II	t-test I – t-test II
Experimental group	4.43sig	3.68sig	0.27ns
Control group	2.57sig	3.01sig	0.41ns
t-test Exp-Control	1.323sig	0.58ns	-----

t value 0.05 = 1.697

t value 0.10 = 1.296 (difference)

The analysis on the effect of the hiking program on female's anxiety control were as follows:

Explanation	Post Test I	Post Test II	t-test I – t-test II
Experimental group	1.10sig	1.80sig	0.38ns
Control group	0.48ns	1.46sig	0.41ns
t-test Exp-Control	0.83sig	0.84sig	-----

t value 0.25 = 0.711 t 0.10 = 1.415

t value 0.25 = 0.692 (difference)

#### IV. Discussion of Findings

##### 1. Effects of the Outdoor Education Hiking Program on Anger Control.

Males and females in the experimental groups, both showed significant increases in their anger control. However, males were not able to control their anger immediately after the program, but until another week after the program or at the time of the final test II.

This finding is supported by Ross (2000, 2006) opinion of a possibility that males used their logic more, compared to females. Hence their feelings were not easily affected during their participation in the outdoors. Females were able to immediately control their anger after the program ended, which is at the time of the final test I. However their anger control was not sustained at the final test II. According to Zap (1998), "women tend to act on feeling much more than men do." On the contrary, men tended to rely more on their rational thoughts, different from women who rely more on their feelings (Brain, 1997). Consequently, there is a possibility that feelings and emotions of females were more easily affected after experiencing spectacular and pleasant wilderness situations. However, after returning to daily life activities and situations, their emotions and anger feelings were not easy to sustain. Results of this finding suggest, that males need more time in controlling their anger compared to females. Perhaps, Tangney's in Brandt

(2001) suggestion, that “women don’t have problems with anger . . . they just manage it differently” challenges further discussions. Results also indicated that no significant increases in the control of anger were found in both the male and female control groups. Based on Tice’s opinion (1993) in Goleman (1995:59) in that anger is the most difficult mood to control, it seems that a particular intervention is needed in order to better control anger, such as a wilderness Hiking program.

## 2. Effect of the Outdoor Education Hiking program on Anxiety Control.

It was evident from the finding of this study that non-participant of the wilderness Hiking program (control group) showed a general increase in the ability to control anxiety, as was the case with the experimental group. It is suspected that daily activities in sport experienced as students of sport education, greatly affect their ability to control anxiety. This finding supported the theory proposed by neuro-scientist Joseph LeDoux (2001); in Ratey & Hagerman (2008:105) in his article entitled, “Overcoming Anxiety through Active Coping.” LeDoux explained that, “active coping means doing something in response to whatever danger or problem is causing anxiety rather than passively worrying about it.” Active coping, according to LeDoux refers to a physical action (exercise). In line with LeDoux’s view stated above, Goleman (1995:67) also stated that, “the worries could be stopped by shifting attention away.”

3. Results also suggest that the control group were able to keep their anxiety in check as was the case with the experimental group. However, if both groups are compared, males and females in the experimental groups were generally better in controlling their anxieties. It is possible that daily sports training for student of sports education in the control groups, is too restricted by institutional rules and requirements, therefore improving more anxious feelings as compared to subjects of the experimental group.

According to Oleson (2000), through challenging such as the hiking program, individuals may experience more peaceful, relaxing and stress reducing experiences. Another advantage obtained by subjects of the experimental group was that they got larger supplies of fresh air in the rich outdoor environment. Nelson (1998), explained that oxygen needed by humans and animals to breathe, comes from plants, or ‘aerion’. The cleaner the air such as in mountain areas, the



greater its ion content. The sudden feeling of well-being experienced during wilderness hiking is not mere imagination. There are two or three million ions each time we breathe in such locations, and that is five to ten times more than the recycled air in polluted cities. Nelson further explained that a person who lacks oxygen often experiences headaches and is easily offended, while extra oxygen will clear someone's mind and adds a new spirit.

Others reasons why the emotional anger and anxiety control for experimental group was improved, may be caused by spiritual reflection during the Outdoor Education activity. According to Dewey in Taniguchi (2004:23), "The knowledge of what is real comes from the experiences each individual has and the more experiences one has with the opportunity to reflect on them, the more educated one becomes."

## **VI. Conclusions and Sugestions**

Results of the four weeks intervention showed that the Outdoor Education hiking program has significant positive effects on the levels of anger control and anxiety control, with the experimental group showing significant better results compared to control group for the anxiety control level. It can be concluded that outdoor education is an important component for educative experiences that exposes students of positive and meaningful experiences in the outside world. Outdoor education enhances aspects of adventure and discovery from outdoor learning experiences, hence being productive source for personal experiences, and provide challenging and exciting inspirations for learners. Outdoor education creates challenging situations in which students have to deal with a variety of immediate decisions make. This valuable experiences could not be met in daily life situations. Outdoor educations emphasizes the wholeness of knowledge and people, and also stresses on social and emotional development of students. Consequently, Outdoor Education should therefore be established as part of the education curriculum, in every level.

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