Volume: 7 Issue: 2 Year: 2010

Wild life recreation: Utilizing wilderness adventure therapy to prevent delinquency in minors

Ali Tekin¹

Abstract

In this study the functionality of wilderness adventure therapy on eliminating and preventing delinquency in minors was investigated based on available literature. The first issue handled in the paper is defining wilderness adventure therapy. Second is the mechanism between juvenile delinquency and wilderness adventure therapy. As the results of this study, the people who participate in wilderness adventure therapy commit lower offence when compared with non-participants. The positive effect of recreation on decreasing and preventing delinquency is still not certain and clear considering the earlier researches. Although it is possible to reach many studies which result in positive outcomes there is a need for further researches to understand whether wild life recreation can be used as a therapy to decrease or prevent delinquency in a therapeutic way.

Keywords: crime preventation, wild-life recreation, youth, wilderness adventure therapy.

Introduction

Leisure is the "social institution most closely associated with the world of adolescence" beyond school (Fine et al, 1990) and is simultaneously a context of risk and protection (Caldwell et al, 2004).

In a study on the developmental stages of 11- and 12-year-old children has produced the alarming finding that they are now on average between two and three years behind where they were 15 years ago in terms of cognitive and conceptual development. It has been speculated that the most likely reasons are "the lack of experiential play in primary schools, and the growth of a video-game, TV culture. Both take away the kind of hands-on play that

¹Asistans Prof. (Ph.D.) Department of Recreation, Muğla Universty, <u>alitekin@mu.edu.tr</u>

allows kids to experience how the world works in practice and to make informed judgments about abstract concepts (Shayer in Crace, 2006).

Of all the contexts in an adolescent's life, leisure has great potential for personally meaningful activity, enjoyment, autonomy, self-determination, becoming connected to community, developing competence, forming durable relationships with adults, voicing opinions, being listened to, feeling a sense of belonging and mattering, and having control over one's actions (Hansen et al, 2005). On the other hand, it is also a time of activity that goes against conventional norms, such as substance misuse, crime and deviancy, excessive gambling, and so on. Thus, it is a natural context for prevention programs.

Prevention has been a primary goal of all institutions and agencies which are related to those fields who seek to decrease crime among the youths and also divert them from antisocial behavior at an early age. While psychological approaches to explain juvenile delinquency include behavioral, psychodynamic, social learning, self concept and cognitive theory, sociological perspectives used to explain it include social disorganization, strain, and the sub-cultural deviance theory (Kratcoski and Kratcoski, 1996). The social control theory provides an explanation of how recreation and juvenile delinquency are associated (Siegel and Senna, 1997). Control theories suggest that delinquent acts occur when a youth's bond to society becomes weak or is broken (Hirschi, 1969).

It is believed that one can develop his/her character and learn citizenship better in leisure activities. That results in delinquency discouragement (Larson, 1994). Such activities are often referred to as recreation, which is defined as voluntary non-work activity that is organized for the gaining of some personal, psychological and social benefits including refreshment, restoration and social cohesion (Kelly, 1996; Tekin, 2009). Social workers and researchers supported recreation as a means to struggle delinquency from 19th century (Witt and Crompton, 1997). The popular press and criminology literature accord that there is a relationship between recreation and delinquency prevention. However, research on this relationship is lacking (Silbereisen and Todt, 1994). Juvenile crime affects community safety and raises the concerns of the public, lawmakers, and politicians (DeJong and Merrill, 2001). Effective treatment must be developed and established to reduce juvenile recidivism.

With the alarming increase in juvenile delinquency nations need to identify and make full use of health promoting experiences that are accessible and effective. Wilderness Adventure Therapy (WAT) has recently been promoted as a legitimate form of complementary and alternative medicine. In recognition of the ways in which it is currently used, Mitten states, "Adventure Therapy Practitioners provide healthcare" (Mitten, 2004).

Wilderness Adventure Therapy (WAT)

Russell (2001) points that "WAT has been defined and characterized in many ways. Rehabilitative outdoor approaches such as "challenge courses", adventure based therapy", or "wilderness experience programs" are often used interchangeably to describe "wilderness therapy. Berman and Berman (1995) define WAT as "the use of traditional theraphy techniques, especially for group therapy, in an outdoor setting, utilizing outdoor adventure pursuits and other activities to enhance personal growth. WAT is a methodical, planned and systematic approach to working with troubled youth. Most of WAT programs targets the adolescents as their primary clients. According to Russell et al. (2000), WAT features therapeutic assessment, intervention and treatment of problems behaviors, and assessment of outcomes. It involves immersion in an unfamiliar environment, group living with peers, individual and group therapy sessions, educational curricula and application of primitive skills such as fire-making and backcountry travel. These processes are all designed to address problem behaviors by fostering personal and social responsibility and emotional growth of clients. Young people aged 12-17 are the most frequent clients.

WAT is based on outdoor education and experiential learning defined. Following the philosophy of Dewey (1938), outdoor education involves cooperative, democratic learning environments that stress an interactive process among students and teachers and experiential learning. Experiential learning is most simply defined as learning by doing (Boss, 1999). Chickering (1976) explained that experiential learning "occurs when changes in judgments, feelings, knowledge or skills result for a particular person from living through an event or events." The Association for Experiential Education (1994) defines experiential education as "a process through which a learner constructs knowledge, skill and value from direct experience." It is "the combination of nature, group and adventure activities (that) provides a rich source of healing potential which in a number of ways goes beyond what therapy has to offer in a more conventional setting" (Gilbert et al, 2004). WAT use outdoor recreational activities and experiential activities as a form of group therapy. WAT, in many countries, has recently been promoted as a legitimate form of complementary and alternative medicine.

WAT programs are used for juvenile populations or people at risk. These activities and experiences all contain elements of real or perceived risk to the participant and focus on developing group skills (Weston et al, 1999). The goal of these programs is to provide a supportive environment away from the distractions of home, school, and the community so that the participants can learn and practice effective behaviors. In this environment, the individuals learn to work cooperatively with other group members to progress through the program (Milner & Nisbet, 1997). Through these experiences, WAT programs seek to improve the participants' interpersonal skills, group skills, sense of trust, self-confidence, self-esteem, physical abilities/fitness, and awareness of the natural world (Moote and Wodarski, 1997). WAT programs emphasize group interaction and natural consequences for behavior. To succeed, the group members must work together; other group members do not tolerate an individual's inappropriate behavior. Group participants are confronted about their inappropriate behavior by others and are required to address the issue before the group can continue in its activities. Appropriate behavior is rewarded through successfully completing challenging activities (Weston et al, 1999). Such interactions offer participants an opportunity to learn pro-social behavior through positive rewards for appropriate behavior and negative consequences for inappropriate behavior. These programs seek to teach alternatives to criminal and aggressive behavior through group interaction and the experience of success in a different environment (Wilson and Lipsey, 2000).

The Link between WAT and Juvenile Delinquency in Minors

The popular press and criminology literature concur that there is a relationship between recreation and delinquency prevention. However, research on this relationship is lacking. This is unfortunate because leisure is a highly relevant factor in the lives of adolescents rivaling school, peers and family in importance (Adams & Gullotta, 1983; Munson, 1993; Silbereisen and Todt, 1994). Wilderness programs that include adventure activities involving military-like discipline are often promoted as effective crime prevention measures for young people in contact with the justice system or those at risk of criminal involvement. However, Jones stated (2004) research reviews show mixed results for such programs. Some research on WAT programs began in the late 1950s (Weston et al, 1999). In the 1970s, many studies indicated positive effects with emotionally disturbed young persons. Several studies indicated that these types of programs had a positive effect on these their self-concepts. However, many of these studies had methodological flaws and, therefore, limited validity. More recent studies, to some extent, have

been improved in terms of methodology. However, the variations in the program practices, types of activities used, and the qualifications of the staff members in these programs make it difficult to produce generalizable research in the field. Current research suggests that WAT programs do have positive results on participants' self-concepts, social functioning, and individual behaviors (Milner and Nisbet, 1997).

In a meta-analysis of studies on the use of adventure therapy with adolescents, Cason and Gillis (1994) found that WAT programs had a statistically significant effect on the participants' scores on clinical scales of depression and anxiety. However, a study conducted by Minor and Elrod (1994) found no such effect in an alternative program for juveniles placed on probation. Pommier and Witt (1995) explored the impact of an Outward Bound School program that included a family training component of self-perception, behavioral, and family functioning variables. At four weeks, the results indicated that the program had a positive impact on the self-perception, behavioral problems, and perception of family functioning among participants when compared to the control group. The authors suggested that such outdoor programs are effective in working with young people, but were not as effective at enabling them to transfer new skills to an old environment. The addition of a family component to outdoor programs had an impact, but it requires support for the family and adolescent upon returning home (Pommier and Witt, 1995).

WAT programs seem to be most effective in positively affecting the participants' self-concept. A meta-analysis of 96 studies conducted by Hattie et al (1997) indicated the greatest effects were on self-control. The themes contained in the self-control outcome included independence, confidence, self-efficacy, self-understanding, assertiveness, internal locus of control, and decision making. These findings are consistent with other literature on wilderness programs. In 1999 there were 2.5 million arrests of persons under the age of 18. Twenty-seven percent of the arrests involved females, and 32% were youths under 15. Although arrests for violent and property crimes dropped 23% and 24% respectively from 1995 to 1999, the numbers are still staggering (OJJDP, 2000).

An important measure of a treatment program's effectiveness is recidivism. The national rate of recidivism for adolescents treated in institutional rehabilitation programs is around 65% However, the results on the effects of WAT programs on recidivism for juvenile offenders are mixed (Williams in Jones, 2004). One study indicated that youth who participated in a 26-day Outward Bound program were found to have a lower recidivism rate

than a control group. At nine months, the treatment group had a lower rate of recidivism (20%) than the control group (34%). This difference was more pronounced at twelve months, with the treatment group rate remaining at 20% and the control group increasing to 42%. After five years, 38% of the treatment group had recidivated, as compared with 58% in the control group ((Wright in Jones, 2004). Another study by Berman and Berman (in Jones, 2004) indicated that after 28 months the treatment group that participated in a 30-day wilderness program had a recidivism rate 15% lower than a group that participated in a standard hospital program. The findings of these studies indicate that participation in WAT programs may help reduce recidivism rates for young people who are at-risk.

Glass and Myers (2001) reviewed several studies that incorporated WAT programs into community programs and schools. One study found positive results in a 12-month follow-up for adjudicated young people who participated in a WAT program integrated with a community-based program. Another study (Glass and Benshoff, 2002) showed an increase in group cohesion among adolescents who participated in a one-day low element challenge course. A study by the Office of Juvenile Justice and Delinquency Prevention (OJJDP, 1999) found that the number of arrests for the young people participating in an after-school recreation program was significantly lower than the number of arrests two years prior to implementation of the program.

Wilson and Lipsey (2000) conducted a meta-analysis of 28 empirical studies of WAT programs. The analysis revealed that the WAT programs were effective in reducing antisocial and delinquent behavior. The programs that were most effective used a combination of intense physical activities and therapeutic components (such as individual, group, and family counseling). Of those studies considering the variable, a recidivism rate of 29% was found for participants in WAT programs and 37% for those in who did not. Intriguingly, the meta-analysis revealed that longer programs seemed to have less effect on delinquency and antisocial behavior when compared to shorter programs (Wilson and Lipsey, 2000), a result contrary to other research results. Other research (OJJDP, 1998) found that WAT programs do not have a significant effect on reducing offense activity.

Minor and Elrod (1994) examined a program for probated juveniles. At an 18-month follow-up, no difference was found between offense activity, self-concept, locus of control, or perceptions of juvenile justice of the participants and others receiving standard probation services. The researchers suggested that the findings indicated a need for developing more

long-term interventions in order to produce positive results (Minor and Elrod, 1994). Cason and Gillis (1994) supported this assertion; their results indicated that longer programs had more positive results on participants. In looking at interventions for both institutionalized and non-institutionalized juvenile offenders, the OJJDP concluded that wilderness/challenge programs had a weak or no effect on juveniles reoffending. Further analysis indicated that these findings were inconsistent with institutionalized offenders and consistent with non-institutionalized offenders. However, this study examined interventions only as a single component in reducing the reoffending rates of juveniles. The OJJDP also found that some of the most effective interventions were multiple-component, indicating a need for more research on these programs, which appear to have a positive effect on reducing recidivism (OJJDP, 1998).

A meta-analysis conducted by Lipsey et al. (2000) revealed similar findings. There is a growing understanding of the fundamental importance of experiencing natural settings for the healthy physical, mental, cognitive, emotional and social development of children and young people. In their latest review of literature on children and nature, Faber et al. (2006) found strong evidence of a causal link between contact with nature and children's healthy development in several domains such as cognitive, social and emotional development. Against the backdrop of growing restrictions on young people's access to the outdoors, this understanding is also reflected in a number of polemical publications.

Louv (2005), in a passionately argued thesis, advocates children's and young people's experience of wilderness as the only means to prevent and cure what he calls "nature-deficit disorder": deprivation that can result in a "cultural autism", manifest with symptoms of tunnelled senses and feelings of isolation and containment. It is claimed that nature-deficit disorder results from the replacement of primary experience of nature by the secondary, vicarious, often distorted, dual sensory (vision and sound only), one-way experience of television and other electronic media (Cooper 2005). By contrast, outdoor adventure and, particularly, adventurous outdoor play, are thought to present young people with a number of benefits, fostering their personal and social development. Louv's arguments are based on a mixture of secondary research evidence and anecdote and epitomise the position of many people involved with exploring issues of young people's relationship with nature. The spectre of a younger generation growing up with no, or only limited, contact with nature is evoked in much of the campaigning literature. The positive outcomes derived

wilderness/adventure therapy are found to derive from other (non-explicitly therapeutic in intent) wilderness adventure experiences as well (Barrett and Greenaway 1995; Louv 2005). For instance, Pretty et al. (2003) use the term 'green exercise' to describe formal or informal physical activities in natural settings; green exercise facilitates a synergy between activity and setting. Children and young people can profit from this synergy between activity and setting at least as much as adults can. The significance of wilderness experiences for children and young people, however, extends beyond any benefits from green exercise. For younger children, outdoor adventure usually takes the form of informal outdoor play. Yet a recent study commissioned by Persil found out that 33% of children aged 7 to 16 avoid playing outside in order to keep their clothes and trainers clean, whereas 72% claim that they regularly avoid messy indoor and outdoor play as their parents do not like them to get their clothes dirty (2005).

Richer (2005) urges parents to see that "getting dirty is part of a child's successful and happy development". And he claims that children's outdoor play promotes their adaptation to their world, their risk-appraisal skills and their sense of balance between proper independence and social understanding. Recent evidence on children's declining abilities in terms of the Piagetian model of development has led to the suggestion that lack of outdoor adventure may be partly to blame (Crace, 2006).

A very comprehensive review of the multiple benefits of children's play was undertaken by Cole-Hamilton (2001), while Bingley and Milligan (2004) documented the links between outdoor play in natural settings during childhood and mental health and wellbeing during subsequent young adulthood. They concluded that childhood play in natural settings has a long-term positive effect on mental health and wellbeing during young adulthood and that "woodland and forests can provide certain therapeutic qualities that a young adult may use to alleviate stress and mental health problems". One recent systematic review showed no overall positive effect from the military type and physical activity aspects of these programs when recidivism was used as the measure of success (Wilson and MacKenzie 2006). This review found that camps might be more effective if the primary emphasis is therapeutic rather than militaristic and physical. Other reviews agree that it is the therapeutic elements of such programs that are crucial to success (AIC 2003; Wilson and Lipsey 2000).

In a review of the crime prevention effect of wilderness challenge programs with delinquent youth, Wilson and Lipsey (2000) found the recidivism rate was eight percent lower for program participants (29%) than for control subjects (37%). In particular they found that established programs were more effective, indicating the need for ongoing core funding to assist programs to be more effective. The following components are likely to increase successful outcomes for programs: thorough assessment and ongoing monitoring of participants, a risk management assessment of activities and screening of program staff, multi-modal treatments with a cognitive-behavioural orientation, e.g. behavior modification techniques, drug and alcohol programs (Lipsey and Wilson 1998; Singh and White 2000), addressing specific criminogenic needs, e.g. attitudes supporting offending, peer groups, family problems, drug and alcohol use, anger and violence problems (Singh and White 2000), meaningful and substantial contact between participants and treatment personnel, and inclusion of an aftercare component (AIC 2003). Programs for Indigenous or culturally and linguistically diverse youth should engage significant others, be culturally appropriate, and have staff who can relate to the clients (Singh and White 2000).

Conclusion

WAT programs are gaining worldwide recognition as an effective approach to engaging people struggling with a variety of difficult life circumstances, in a participatory process of change. A combination of nature, small groups and adventure and challenge activities are found to provide powerful experiences of learning and change in educational and therapeutic contexts.

WAT programs often utilise physically demanding adventure activities, the importance of physical contact with nature remains critical within many program experiences. In a major collaborative study, Maller et al. (2002) presented a review of the health and wellbeing benefits arising from "contact with nature" in an adventureous setting. Strong anecdotal, theoretical and empirical evidence suggests that humans gain biological, physiological, mental, social, and economic benefits from contact with nature. Research now clearly demonstrates that "contact with nature" can positively affect mood state, reduce stress and tension, assist recovery from mental fatigue, and boost self confidence, amongst other outcomes (Maller et al., 2002; Kuo, 2001; Kuo & Sullivan, 2001). In their US-based study on the benefits of wilderness experience programs, Kaplin and Talbot (cited in Ibbott 1999)

noted that nature in general, and wilderness in particular, made substantial differences in psychological benefits obtained.

The positive outcomes of WAT for delinquent behaviour in minors have been reported in many studies, yet, further research should be done to clarify and make it more certain.

References

- Adams, G.R. and Gullotta, T. (1983). Adolescent Life Experiences. Monterey, CA: Brooks Cole.
- Association for Experiential Education (AEE). (1994). *AEE definition of experiential education*. Boulder, CO: Association for Experiential Education.
- Australian Institute of Criminology 2003. What works in reducing young people's involvement in crime? Review of current literature on youth crime prevention.
 Canberra: ACT Chief Minister's Department.
- Barrett, J. and Greenaway, R. (1995). Why Adventure? The Role and Value of Outdoor Adventure in Young People's Personal and Social Development. A Review of Research. The Foundation for Outdoor Adventure.
- Berman, D. S., & Davis-Berman, J. L. (1995). Outdoor education and troubled youth.
 Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools. (ERIC Document Reproduction Service No. ED 385 425).
- Berman, D.S. and Berman, D.J. (2000). Therapeutic Uses of Outdoor Education.
 Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools. ERIC
 Document Reproduction Service No. ED448011.
- Bingley, A. and Milligan, C. (2004). Climbing trees and building dens. Mental health
 and well-being in young adults and the long-term effects of childhood play experience.
 Research Report, Institute of Health Research, Lancaster University.
- Boss, J.A. (1999). Outdoor education and the development of civic responsibility.
 Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools. (ERIC Document Reproduction Service No. ED425051)

- Caldwell, L.L., Baldwin, C.K., Walls, T. and Smith, E.A. (2004). Preliminary effects
 of a leisure education program to promote healthy use of free time among middle
 school adolescents. *Journal of Leisure Research*, 36(3): 310–335.
- Cason, D. and Gillis, H. L. (1994) A meta-analysis of outdoor adventure programming with adolescents. *The Journal of Experiential Education*, 17(1): 40-47.
- Chickering, A. (1976). *Developmental change as a major outcome*. In M. Keeton (Ed.), Experiential learning (pp. 62–107). San Francisco, CA: Jossey Bass.
- Cole-Hamilton, I., Harrop, A. and Street, C. (2001). *The Value of Children's Play and Play Provision: A Systematic Review of Literature*. N. P. Institute.
- Cooper, G. (2005). Disconnected children. *ECOS*, 26(1): 26–31.
- Crace, J. (2006). Children are less able than they used to be. *The Guardian* newspaper, Tuesday January 24th 2006.
- DeJong. C. and Merrill, E.S. (2001). Getting "Tough On Crime": Juvenile waiver and the criminal court. *Ohio Northern University Law Review*, 27(2): 175–196.
- Dewey, J. (1938). Experience and education. New York: Macmillan
- Faber Taylor, A. and Kuo, F.E. (2006). Is contact with nature important for healthy child development? State of the evidence, in C. Spencer and M. Blades (eds) *Children and their Environments: Learning, Using and Designing Spaces*. Cambridge: Cambridge University Press, pp. 124–140.
- Fine, G.A., Mortimer, J.T.and Roberts, D. (1990). Leisure, work, and the mass media. In S.S. Feldman & G.R. Elliott (Eds.), *At the threshold: The development adolescent* (pp. 225–254). Cambridge, MA: Harvard University Press.
- Gilbert, B., Gilsdorf, R. and Ringer, M. (2004). Playing with idas about adventure therapy: Applying principles of Gestalt, Narrative and Psychodynamic approaches to adventure therapy. In S. Newes & S. Bandoroff (Eds.) *Coming of Age: The evolving Field of Adventure Therapy*. Boulder, CO: Association of Experiential Education.
- Glass, J. S., & Myers, J. E. (2001). Combining the old and the new to help adolescents: individual psychology and adventure-based counseling. *Journal of Mental Health Counseling*, 23: 104–114.

- Glass, J. S., & Benshoff, J. M. (2002). Facilitating group cohesion among adolescents through challenge course experiences. *The Journal of Experiential Education*, 25, 268–277.
- Hansen, D., Larson, R, & Dworkin, J. (2003). What adolescents learn in organized youth activities: A survey of self-reported developmental experiences. *Journal of Research on Adolescence*, 13: 25–56.
- Hattie J., Marsh, H.W., Neill, J.T., Richards, G.E.(1997). Adventure Education and Outward Bound: Out-of-class Experiences that Make a Lasting Difference *Review of Educational Research*, 67, 43–87.
- Hirschi, T. (1969). Causes of Delinquency. Berkeley, CA: University of California Press. In S. Bandoroff & S. Newes (Eds.), *Coming of age: The evolving field of adventure therapy* (pp. 31–55). Boulder, CO: Association of Experiential Education.
- Ibbott, K. (1999). Wilderness therapy. *Psychotherapy in Australia*. 5(2): 6–10.
- Jones C.D (2004). The Effectiveness of Wilderness Adventure Therapy Programs for Young People Involved in the Juvenile Justice System. *Residential Treatment for* Children & Youth, Vol. 22(2): 53–67.
- Kelly, J.R. (1996). Leisure. Boston: Allyn and Bacon.
- Kratcoski, P. C., and Kratcoski, L. D. (1996). Juvenile Delinquency. Upper Saddle River, NJ: Prentice Hall.
- Kuo, F. E. (2001). Coping with poverty: Impacts of environment and attention in the inner city. *Environment & Behavior*, 33: 5–34.
- Kuo, F. E., & Sullivan, W. C. (2001). Environment and crime in the inner city: Does vegetation reduce crime? *Environment & Behavior*, 33: 343–367.
- Maller, C., Townsend, M., Brown, P. and St Leger, L. (2002). The health benefits of
 contact with nature in a park context: A review of current literature. Melbourne:
 Deakin University and Parks Victoria.
- Larson R. and Richards, M. (Eds.). (1989). The Changing Life Space of Early Adolescence [Special issue]. *Journal of Youth and Adolescence*, 18(6): 501-626.

- Larson, R. (1994). Youth Organizations, Hobbies, and Sports as Developmental Contexts. In R. Silbereisen and E. Todt (Eds.), Adolescence in Context: The Interplay of Family, School, Peers and Work Adjustment. New York: Springer-Verlag.
- Lipsey M.W and Wilson D.B. (1998). Effective intervention for serious juvenile offenders: a synthesis of research, in Loeber R & Farrington D (eds), *Serious and violent juvenile offenders: risk factors and successful interventions*. California: Sage: 313–345
- Louv, R. (2005). Last Child in the Woods: Saving our Children from Nature-Deficit Disorder. North Carolina, Chapel Hill, Algonquin Books of Chapel Hill.
- Milner, D.and Nisbet, J. (1997). Bringing therapeutic wilderness-program ideas into the classroom. *Intervention in School & Clinic*, 33 (1), 30–36.
- Min or, K.I. and Elrod, H.P. (1994). The effects of a probation intervention on juvenile offenders? self-concepts, locus of control, and perceptions of juvenile justice. *Youth and Society*, 25(4), 490-511.
- Mitten, D. (2004). Adventure therapy as complementary and alternative medicine.
 Coming of Age: The Evolving Field of Adventure Therapy. In S. Bandoroff & S.
 Newes (Eds.), Coming of age: The evolving field of adventure therapy (pp. 240-260).
 Boulder, CO: Association of Experiential Education.
- Moote, Jr., G.T. and Wodarski, J.S. (1997). The acquisition of life skills through adventure-based activities and programs: A review of the literature. *Adolescence*, 32 (125), 143-168.
- Munson, W.W. (1993). Perceived Freedom in Leisure and Career Salience in Adolescence. *Journal of Leisure Research*, 25(3), 305-314.
- Office of Juvenile Justice and Delinquency Prevention (OJJDP Statistical Briefing Book). (2000). http://ojjdp.ncjrs.org/ojstabb/html/qa250.html.
- Pommier, J.H. and Witt, P.A. (1995). Evaluation of an outward Bound school plus family training program for juvenile status offenders. *Therapeutic Recreation Journal*, 2: 86-103.

- Persil (2005) Persil Dirt is Good. www.dirtisgood.co.uk
- Pretty, J., Griffin, M., Sellens, M. et al. (2003) *Green Exercise: Complementary Roles of Nature, Exercise and Diet in Physical and Emotional Well-being and Implications for Public Health Policy*. CES Occasional Paper, 2003-1. University of Essex.
- Richer, J. (2005) *Dirt is Good.* http://www.smutsarbra.se/pressmaterial/Whitepaper.pdf.
- Russell, K.C. (2001). What is Wilderness Therapy? *Journal of Experiental Education*, 24(2): 70-79.
- Russell, K.C., Hendee, J.C., Philips-Miller, D. (2000). How Wilderness Works: An
 examination of the Wilderness Therapy Process to Adolescents With Behavioral
 Problems and Addictions. USDA Forest Service Proceedings RMRS-P–15-Vol:3.
- Siegel, L.J., and Senna, J.L. (1997). Juvenile Delinquency: Theory, Practice, and Law. St. Paul: West Publishing Company.
- Silbereisen, R.K. and Todt, E. (1994). Adolescence--A Matter of Context. In R. Silbereisen and E. Todt (Eds.), Adolescence in Context: The Interplay of Family, School, Peers, and Work in Adjustment (pp. 3-21). New York: Springer-Verlag.
- Singh D. and White, C. (2000). Rapua te huarahi tika: searching for solutions: a review of research about effective interventions for reducing offending by Indigenous and ethnic minority youth. New Zealand: Ministry of Youth Affairs
- Tekin, A. (2009). *Rekreasyon*. Ata Ofset Matbaacılık, Ankara.
- Weston, R., Tinsley, H.E.A. and O'Dell, I. (1999). Wilderness adventure therapy for at-risk youth. *Parks & Recreation*, 34 (7), 30–40.
- Wilson D.B & MacKenzie D.L. (2006). Boot camps, in Welsh BC & Farrington DP (eds), Preventing crime: what works for children, offenders, victims and places.
 Dordrecht: Springer 2006: 73–86
- Wilson, S.J. and Lipsey, M.W. (2000). Wilderness challenge programs for delinquent youth: A meta-analysis of outcome evaluations. *Evaluation and Program Planning*, 23 (1): 1–12.

Tekin, A. (2010). Recreation: Delinquency Preventation. *Uluslararası İnsan Bilimleri Dergisi* [Bağlantıda]. 7:2. Erişim: http://www.insanbilimleri.com/en

• Witt, P.A. and Crompton, J.L. (1996). The At Risk Youth Recreation Project. *Parks & Recreation*, 14(3): 1-9.