THE RELATIONSHIP BETWEEN PARENTAL ALCOHOLISM AND THE BEHAVIORAL ASPECTS OF RUNNING ADDICTION

By

LADONA TORNABENE

Bachelor of Science

Louisiana State University

Baton Rouge, Louisiana

1988

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
July, 1992

THE RELATIONSHIP BETWEEN PARENTAL ALCOHOLISM AND THE BEHAVIORAL ASPECTS OF RUNNING ADDICTION

Thesis Approved:

Thesis Advisor

Dean of the Graduate College

ACKNOWLEDGEMENTS

First of all, I would like to thank my Committee, Dr.Betty Edgley, Dr. Steve Edwards and Dr. Milton Rhoads for going the "extra mile" with me. I could not have done this without your vital feedback, support and encouragement. You guys are super!

Dr. Edgley, as the "Chair" of my Committee, you've done everything but "sit down" on the job! Thanks for sweating with me, for laboring during your off hours and for your willingness and eagerness to see me through this project. You're wonderful at pacing me and helping me take things in stride!

Dr. Edwards, your statistical expertise astounds me! Thanks for devoting your time to helping with the analysis of this data and its interpretation. Your assistance has indeed made a significant difference in favor of me getting this project computed and completed!

Dr. Rhoads, thanks for always smiling and lifting my spirits! Your knowledge on drug and alcohol abuse was very helpful to me as well as your insight into addictive behavior. Thanks for being so understanding and for sharing your "fish" stories! Hope you hook some big ones!

I would also like to thank the following individuals who helped me distribute questionnaires: Dr. Jerry Crockett,

Dana Courville, Dr. Lori Hunt, Dr. Rex Finnegan, Dr. Betty Edgley, Jan Richter, Darla Fent and Sherrie Stith. Your help was instrumental to me!

The crew at Kinko's and Interlibrary Loan were wonderful in assisting me in anyway possible. Thank you! Also, thanks be to Dr. Caneday for his willingness to always be of service. Dr. Aldana, many thanks for helping with this print out. Special thanks is in order for Dr. Hunt who helped me overcome my phobia of the review of literature by suggesting the note card method. It got me started! The only problem I incurred was losing them, but miraculously, I found them again! Thank you Dr. Edwyna Testerman for the pep talks and encouragement. Your words were a guide to me throughout this study and yes, I took your advice! Thanks to Jeni Walker for the fine job you did in typing my questionnaire.

In addition, I wish to express my gratitude to Jeanne Croka for being so understanding and allowing me to take time off work in order to complete this! Otherwise, I may have entered into extreme sleep deprivation! I would also like to thank my friends, relatives and those at New Covenant Fellowship for their endless prayers. I'm a firm believer now in the power of prayer! Also, thanks to Beverly Bittle for the gift of laughter! Your care and concern provided strength for me when I needed it the most.

And Mom, what can I say? Your never ending support and encouragement for everything I've ever done has made a

significant difference in my life. Thank you for upholding me with your love and exhorting me to meet all my thesis deadlines! Also thanks to my brother for his support and love. Knowing that I can always count on you, Newey, makes life easier for me. Special thanks to Aunt Ethel- your love has made a difference.

Now I wish to take this opportunity to thank my roommate, Carolyn Cogswell, for sacrificing her time while in the midst of completing her thesis in order to help me. Your assistance meant a lot and I know that one of these days, your future in research will have a significant impact on today's world. Go get 'em!!

A very special thanks to my colleagues, the faculty, staff and students for your support throughout this ordeal. It was fun being able to share this with you!

And to Jesus---thanks for helping me keep my head together and for your grace and mercy which upheld me many times throughout this project. Also, thanks for blessing me with such a tremendous committee!

To all who participated---- THANK YOU!!

TABLE OF CONTENTS

Chapter Page

LIST OF TABLES

CHAPTER I

INTRODUCTION

Kenneth H. Cooper, known as the man who started America running, became a symbol of the American exercise movement beginning with his best seller entitled Aerobics (1968). This book was based on a point system which allotted for frequency, duration, and intensity to become guidelines in establishing proper aerobic exercise programs. Soon after, many Americans adopted running into their lifestyles. Then in 1972, Frank Shorter took the Olympic gold medal for the marathon, thus further contributing to the popularity of running in the United States. Dr. Cooper continued to spark interest in running with the "aerobic challenge" movement that swept across America. This, combined with Jim Fixx's best seller, The Complete Book of Running (1977), seemed to secure running deeply into the hearts of Americans. Today several million Americans run or jog on a regular basis. Running as a method to maintain cardiovascular fitness is a well recognized and valid form of aerobic exercise which encompasses several benefits. Running for 20-30 minutes three times a week, at 60%-80% of target heart rate has been shown to improve the cardiorespiratory system, control blood pressure, and prevent cardiovascular disease (Neiman, 1990). In addition, running may elevate mood, decrease anxiety,

decrease depression, increase self-concept and reduce the risk of chronic disease (Neiman, 1990). However, these benefits may be offset when running is abused. Some runners may abuse exercise to the point that it becomes an addiction. The specific cause of the addiction is unknown, although many people succumb to the idea that endorphins are responsible for what is referred to as the "runners high". These endorphins are a part of the body's hormonal system of morphine-like chemicals said to be responsible for the runners induced euphoria. However, compelling scientific evidence is largely absent, so much so that Neiman claims that present research data does not support the belief that mood elevation and decreased depression is even caused by the increase in endorphins (Neiman, 1990). This lends credence to a host of other variables which may play a significant role in the addiction process of the runner. Some other factors to be explored would be family history, inability to take a day off without emotional distress, history of overuse injuries and ignored consequences resulting from these injuries or other circumstances (Thompson, 1990).

Morgan (1979) has described individuals with running addictions to have such a commitment to the exercise that obligations to work, family, and interpersonal relationships suffer. These runners tend to be compulsive and may very well use running as an escape in order to avoid dealing with emotional issues. Running may provide the fix which

stabilizes their inadequacies; however, the run can only be a temporary sedative. These runners may also live in a state of chronic fatigue, become very preoccupied with fitness, body image and diet, which may nullify any psychological benefit that more moderate exercise could bring (Neiman, 1990). Rudy and Estok (1990) state that those who are addicted to running may neglect family responsibilities and relationships as well as run when injured. Rudy and Estok (1990) further imply that those addicted to running are prone to consider their daily run as being more important than anything else in life. When exercise extremists are injured and forced to stop exercising, depression often follows as well as symptoms similar to those observed with drug withdrawal (DeBenedette, 1990). The process and pattern of addiction are complex and may be triggered by several factors.

According to recent research, parental alcoholism may be a factor in producing individuals with addictive characteristics. People who come from families where one or both parents were alcoholics are commonly referred to as Adult Children of Alcoholics (ACA's). Friel and Friel (1988) adhere to the philosophy that addictions are actually symptoms of a deep-seated underlying dependency that evolved out of the family systems during childhood. Since these adult children may not have had the opportunity to develop a keen sense of self, they may look to external sources to validate themselves (Sell, 1989). Thus, ACA's may adopt

running as part of their identity (Friel and Friel, 1988). An example of this type of behavior is explained by Fahey (1989) as he states that all too frequently people think of themselves solely as runners, rather than people who participate in those activities. It is generally accepted that these adult children also have problems with their own compulsive and obsessive behavior, as well as have a strong need for perfection.

Statement of the Problem

The problem of this study was to determine if people who come from families where one or both parents were alcoholics tend to become addicted to running.

Delimitations

The delimitations of this study were:

1. Subjects were male and female between the ages of 17 and 57 years old who volunteered to participate in this study.
2. Subjects were obtained from the Stillwater Running Club, Baton Rouge Running Club, Oklahoma State University Leisure Classes, the Oklahoma State University track team, and from other runners ranging from recreational to competitive.
3. Only subjects who filled out pertinent data on questionnaires were utilized in this study.

Limitations

1. Subjects were volunteers and not randomly selected.

2. Subjects were administered the Running Addiction Scale (RAS), the Children of Alcoholics Screening Test (CAST), and the Children from Alcoholic Family Item (CAF). Although these tests have proven reliability and validity, they have not been previously used in concordance with this particular type of study.

Assumptions

It was assumed that participants completed surveys honestly.

Hypotheses

The following hypotheses were tested at the .05 level of significance:

1. There will be no significant difference in the Running Addiction Scale (RAS) scores between adult children of alcoholics (ACA's) and adult children of nonalcoholics (non-ACA's) as measured by the Children of Alcoholics Screening Test (CAST).
2. There will be no significant difference in the RAS scores between ACA's and non-ACA's as measured by the Children from Alcoholic Family item (CAF).

Definitions

The following are functional definitions which were used in this study:

Addicted runner. One who scores a 37 or above on the Running Addiction Scale (RAS) which consists of using a five

point Likert scale from strongly agree to strongly disagree. Scores can range from a maximum of 55 to a minimum of 11.

Alcoholic. A person whose normal, daily activities and responsibilities have been negatively affected by the habitual and compulsive consumption of alcoholic beverages.

Alcoholic Family. A unit in which one or both parents is an alcoholic.

Adult Children of Alcoholics. Adults who as children had at least one alcoholic parent.

Adult Children of Nonalcoholics. Adults who as children did not have an alcoholic parent.

Non-addicted runner. One who scores a 28 or below on the Running Addiction Scale (RAS) which consists of using a five point Likert scale from strongly agree to strongly disagree. Scores can range from a maximum of 55 to a minimum of 11.

Parents. Those who reared the child; not necessarily the biological parents.

Runner. Anyone who engages in the sport of running, be it recreational or competitive.

Running Addiction. "A psychological and/or physiological dependence upon a regular regimen of physical activity, characterized by recognizable withdrawal symptoms when the need to exercise remains unfulfilled after 24-36 hours" (Sachs and Pargman, 1979, p. 143).

CHAPTER II

REVIEW OF LITERATURE

Although running has been recommended consistently and continuously throughout the years as a vital source of aerobic exercise, its benefits may become submerged if and when a pattern of abuse develops by the participant. Drug use can be analogous to this because when drugs are taken as prescribed, they carry the potential to be very beneficial to the user. However, when taken in doses exceeding the specifications, they have the potential to be very dangerous and even deadly. So it may be when runners exceed moderation while exercising to the point of throwing their entire lives out of balance and risking their physical, mental, social and emotional well-being.

The root of running addiction may be brought on by some factors that were initially beyond the runner's control. Individuals who were reared in families where one or both parents were alcoholics may develop certain characteristics that could predispose them to addiction.

The following is a review of various pieces of research conducted in the field of addiction, beneficial running, running addiction, personality development, and characteristics of adult children of alcoholics. From the insight provided, a better understanding of the phenomenon

of running addiction and adult children of alcoholics may emerge.

Addiction

First, in order for the concept of running addiction to be fully comprehended, it is important that one has a general understanding of addiction and its basic components. Traditionally, the term "addiction" has been used extensively when pertaining to drug or alcohol abuse. However, present literature (Friel and Friel, 1988; Hemfelt and Fowler, 1990; Martin, 1990) supports the concept that addiction may manifest itself through any medium, be it food, sex, work, relationships, gambling, over-spending, or over exercising.

A basic definition of addiction as supplied by the American Heritage Dictionary (1985) reads as follows: addiction is a (process) of devoting or giving oneself habitually or compulsively (to an activity or substance). According to Fields (1992), addiction has three basic components: 1) Obsessive-compulsive behavior 2) Inability to stop the behavior 3) Continued use regardless of adverse consequences. Breaking down these components beginning with the first reveals that the person may fear being without the substance. The drug becomes a dominant theme in one's thought patterns and/or an integral part of one's life. There is a compulsion to substitute other drugs if that specific one is not available. The second component deals

with the person's inability to stop or limit the activity or refuse the substance if it is available. The third component reveals the continued use of the drug even in the face of medical, psychiatric and social consequences (Fields, 1992). Carroll (1989) affirms that after the addictive state has developed, the drug becomes the central focus of that person's life causing the addict to become completely disinterested in other people and activities.

Peele (1979) believes that addiction comes not solely from the drug; rather, it begins with the person, the person's situation, and that person's search for a given experience. In other words, it is the relationship that one has with a given substance which perpetuates the addiction as opposed to the actual substance itself. Sachs (1981) also considers addiction as a process, not a condition. He says, "Addiction is an extension of ordinary behavior, a pathological habit, dependence, or compulsion" (Sachs, 1981, p. 117). Sachs affirms Peele in his view in terms of addiction not being characteristic of activities per se, but of the relationship one forms with these events. When involvement is at the point where it eliminates choice in all areas of life, an addiction has been formed (Sachs 1981).

Martin (1990) has found that a key determinant of addictions is persistence of the given behavior in spite of harmful consequences. He agrees with Sachs (1981) in stating that addiction is a process. However, this process

doesn't remain constant, but changes over time. As this change occurs it consumes more and more of a person's energy and resources to the point that it may become destructive or even fatal. Martin divides this addiction process into three stages. The first stage involves a pleasurable mood change and may give the illusion of comfort and control. The addiction begins when this person repeatedly seeks out these illusions in order to avoid unpleasant situations or feelings. In stage two, the person's involvement with the activity is ever increasing. The addict is no longer acting within socially accepted limits and others begin to notice that something is wrong. The addiction now becomes a lifestyle. Stage three consists of maintaining the addiction at any cost as if nothing else in life mattered. The person now behaves in ways that are unusual and counterproductive. The addict cannot break out of this stage alone (Martin, 1990).

Clearly, each researcher proclaims a unique understanding of the meaning of addiction, yet just as clearly, some definitions overlap. Addiction is a complex topic and its adaptability in the lives of individuals is equally complex. Exactly how and why addictions manifest themselves is not fully understood; however, there are some theories behind running addiction which will be presented.

Beneficial Running

To further the comprehension of running addiction, it is imperative that the benefits of running be clearly defined so as to gain an understanding of why this form of exercise is appealing to people. Running for 20-30 minutes three times a week, at 60%-80% of target heart rate has been shown to improve the cardiorespiratory system, control blood pressure, and prevent cardiovascular disease (Neiman, 1990). In addition, running may elevate mood, decrease anxiety, decrease depression, increase self-concept and reduce the risk of chronic disease (Neiman, 1990). According to Carmack and Martens (1979), people begin running for the following reasons: to get in shape, for enjoyment, to lose weight, to maintain fitness and because they feel that they are "good at it". The reasons people continue to run are very similar as they include: fitness maintenance, enjoyment, competition, weight control and an overall sense of feeling better (Carmack and Martens, 1979).

These are the reasons given for beginning and continuing to run. What these people reap in the way of benefits from running, according to Carmack and Martens (1979) are explained as follows. First, they may see an improvement in their physical health which includes cardiovascular conditioning and weight control. Next they may experience a psychological uplift as anxiety decreases and mood enhancement increases. These benefits can also

affect their self-image in terms of giving these runners a sense of accomplishment and self-respect. Running may also bring fellowship with other runners, providing a sense of affiliation for its participants. Lastly, achievement can come to these individuals in the form of success in competition against other runners or competition against themselves (Carmack and Martens, 1979).

Running Addiction

With the above taken into consideration, it may allow for greater introspect into the hearts and minds of those individuals who adopt running into their lifestyle. The benefits are enticing and are good; however, these benefits may be offset when running is abused. Morgan (1979) has discovered that when runners who are addicted are deprived of running, a myriad of symptoms await them. They are as follows: generalized fatigue, depression, anxiety, extreme irritability, restlessness, insomnia, muscle tension, soreness, decreased appetite, constipation, and irregularity. In other words, the very benefits of running may be reversed when running is taken to the extreme (Morgan, 1979).

How the concept of "when running is taken to the extreme" is defined varies among researchers in the field; however, virtually all of them have taken an in depth look at the withdrawal symptoms exhibited when running ceases. Sachs and Pargman (1979, p. 143) give the following

definition of exercise addiction: "Exercise addiction may be defined as psychological and/or physiological dependence upon a regular regimen of physical activity and is characterized by recognizable withdrawal symptoms when the need to exercise remains unfulfilled after 24-36 hours". This definition is regarded as the most comprehensive definition of exercise addiction by Hailey and Bailey (1982). Hoeger (1991,p. 218) states that "compulsive exercisers often express feelings of guilt and discomfort when a day's workout is missed". Morgan (1979) listed depression, anxiety, guilt and irritability as dominant withdrawal symptoms when addicted runners are unable to run. Chapman and deCastro (1990) observed that when those who are addicted to running are forced to stop, physical and psychological symptoms may occur.

As stated, withdrawal symptoms appear to be a major link in the diagnosis of running addiction, yet they are not the only link. Morgan (1979) gave three requirements to be met when defining running addiction. 1) The person must feel that running is necessary in order to cope with daily life. 2) This person believes it is impossible to live without a daily run. 3) The person must experience withdrawal symptoms if deprived of running. Sacks (1981, p. 114) considers running addiction to be a compulsive activity; "a symptom of an underlying conflict that has been symbolically expressed by compulsive running and which may require therapeutic intervention". Sacks (1981) further

characterizes the addict by needing to run at least once and sometimes twice a day regardless of inclement weather, illness, or physical pain due to injuries.

Thus far it would almost seem that running paraphernalia should depict a warning label which reads as follows: Continuous and obsessive involvement in this activity may cause all benefits derived to reverse themselves, thus enabling running to actually become hazardous to one's health. Certainly this is a facetious statement, but it still reminds individuals of the seriousness of running addiction.

However, one popular researcher would not agree with the negative connotations of running addiction. Glasser (1976) strongly upholds running as being a positive addiction. He states that positive addiction provides psychological strength and increases the satisfaction derived from life and that many people, both weak and strong can help themselves become stronger through positive addiction. Glasser's framework is based on the psychological benefits of running which he says increase one's mental strength and causes an extremely pleasurable, often euphoric effect which makes the experience so wonderful that it leads to addiction. This mental effect, which he calls "spinning free", is a trancelike, transcendental state which takes place while running. During this relaxed state the brain is allowed to grow and become stronger which permits a psychological expansion. It

is this process that causes the positive addiction state to feel so good. But even this positive addiction is not exempt from withdrawal. Glasser parallels the way in which runners become addicted to running with the manner in which drug users become addicted to drugs by observing that each addiction produces withdrawal symptoms when it is withheld from the user. The differentiation between drug addiction and running addiction is that the effects of drugs are harmful to the addict whereas the consequences of running are beneficial. Glasser's rationale for withdrawal in addicted runners is that the runners are deprived of such expected, unique pleasure and this deprivation leads to some kind of pain, misery or feelings of guilt. He further claims that even though the positive addiction is enjoyable, it does not dominate the person's life as a negative addiction would (Glasser, 1976).

Glasser considered running to be a positive addiction and although his work was not research-based in the sense of rigorous experimental design and statistical analysis, he did provide insight into how activities can be physiologically and psychologically supportive (Rudy and Estok, 1989). However, Glasser's theory of positive addiction does not appear to be without serious questioning by other researchers. Morgan (1979, p. 69) can certainly empathize with Glasser's viewpoint by the following statement: "The running experience has numerous psychological and physiological benefits that have led

authors such as Glasser to view running as a positive addiction". This seems reasonable because vigorous running programs are known to decrease depression and anxiety as well as increase self-esteem. Yet, it has become apparent to workers in the field of sports medicine such as team physicians, psychiatrists, psychologists, orthopedists, and podiatrists, that some runners become negatively addicted to running. Indeed, Morgan challenged that running addiction is always positive and began the study of the negative aspects of addiction in runners and found that the negatively addicted runner will continue to exercise when it interferes with other aspects of life, including health, career, and interpersonal relationships (Morgan, 1979).

Rudy and Estok (1989) propose that when running becomes the dominant force in an individual's life so that the person has little or no regard for physical injuries, responsibilities to the family and interactions outside the running arena, the behavior can hardly be considered positive. Rudy and Estok (1989, p. 552) further state that: "Based on available studies on addictive behaviors in runners, there is recognition that running which is motivated by an addictive mechanism has the potential to overpower the sensible, beneficial approach to exercise".

Sachs and Pargman (1984) do not seem to view running addiction as positive whenever it becomes a controlling factor, eliminating other choices in life. Peele (1979,

p. 292-293) suggests that: "In order for the experience of addiction to grow to dominate a person's life, it must destroy the person's ability to derive satisfaction from other involvements, including work and other relationships aside from those connected to the person's addiction.... For the addict, addiction is an alternative to the demands of a straight lifestyle and the need to cope with them". Martin (1990) foresees trouble when the following takes place: the runner begins to abandon other things; jobs and/or relationships take second place to running; physical health is jeopardized and the runner gets depressed and miserable when unable to run. Chapman and deCastro (1990) believe that when runners become addicted, even when they have been advised by a physician to rest, some continue to run, resulting in serious musculoskeletal injuries. "Conceptually, addiction to running may be viewed as a process which compels an individual to run in spite of obstacles and results in physical and psychological symptoms when withdrawn" (Chapman and deCastro, 1990, p. 284).

Precisely how running addiction develops is debatable among researchers, yet several theories have been hypothesized. As previously mentioned, addiction is a process. Morgan (1979) explains stages in this process of how running is adopted as part of one's lifestyle, then gives warning signs for how it crosses that seemingly invisible line into addiction. He states that it begins when the individual adopts a jogging program. The first

experience is usually tinted with discomforts such as shortness of breath, blisters, nausea, side stitches and muscle soreness. After continuing, these unpleasant experiences gradually fade as the body becomes conditioned to the demands of running. Then the impossible becomes reality as the runner makes that first mile. The experience of running begins to be enjoyable. Gradually, the runner increases weekly mileage and experiences positive psychological changes (i.e. decreased depression and anxiety, increased self-esteem) and physiological changes (i.e. weight loss, decreased blood pressure, and heightened sense of well-being). At this point, running is safely adopted into one's lifestyle without an addiction occurring. Perhaps the key for runners shifting from moderation to addiction may lie under the "more is better" mentality, but Morgan states that as the runner's focus shifts from the external to the internal, a reordering of priorities occurs and greater importance is placed on self. Herein lies the warning signs that Morgan proposes as breeding grounds for an addiction. The first sign is when less attention is given to the spouse, children or significant others as running progresses from zero to three to four hours a day. The second is when increased awareness of self becomes so encompassing that it begins to lead to less interest in vocational achievement. Promotions in the work place would only bring increased responsibility, additional stress, and the possibility of relocation; all of which leave less time

and attention to devote to running. This mentality possessed by the runner can actually jeopardize employment all together. Morgan goes on to say that at this point, loved ones and friends have been relegated intentionally or unintentionally to roles of insignificance and feeling good is the top priority for the runner. Morgan believes that addicts give their daily runs higher priority than their family, friends, or jobs. He says that addicts run first and if time permits, they love, work, and socialize. The danger in this addiction increases if a medical problem should arise (e.g. injury) because the runner now needs the exercise high and would continue to run searching for the perfect shoe, orthotic, injection, analgesic or psychological strategy that will enable running to be resumed. Morgan actually documents case reports of runners who run through the pain only to end up having surgery, all future hopes of running terminated, and a permanent hindrance to everyday walking. Now the individual risks self-destructing and running has become an end in itself rather than a means to an end (Morgan, 1979).

Even though a decade has passed since Morgan's comments were originally published, Martin (1990) seems to resound some of Morgan's philosophy in terms of addiction being a progression beginning for good, healthy causes, but somewhere, somehow crossing a line into degeneration and the harvest of negative benefits. Martin sees this progression occurring in several stages and states that the initial

decision to take up running is based on a dissatisfaction with a sedentary lifestyle. The second stage involves initial success which can be attained very soon from running because running does not involve complicated athletic skills. It is during this second stage that the individual may see some benefits of running manifested. For instance, the runner is able to sleep better, enjoy eating more, or finds depression lifted. The third stage involves a heavier investment of money and time put into running. Running paraphernalia and equipment is purchased and more time is devoted to the activity until after a while, it begins to affect one's family and social life. The fourth stage centers around the reinforcement that the individual receives for achievements related to running. For example, friends compliment on weight loss; the increased energy level shows up in work productivity; stress is reduced and an overall sense of well-being consumes the participant. Martin emphasizes that if the person's involvement remains at this stage, running will continue to be a rewarding and satisfying experience. However, should the runner cross that "invisible line" into the next stage, the person runs the risk of becoming addicted. Stage five brings the runner to a point of confusion between means and ends. Running then becomes the goal rather than a means to physical and emotional well-being. In the sixth stage, running becomes excessive and other activities, such as work and family relationships, are subordinated. The addiction is now in

charge as the addict is willing to sacrifice other areas of life for running. When addiction progresses to the seventh stage, this is where injuries may result from excessive participation. These injuries are usually musculoskeletal in nature and include but are not limited to, shin splints, runner's knee, chronic back pain, pulled muscles, iliotibial band syndrome, stress fractures and other manifestations which can become acute or chronic. It is here that the runner may be forced to stop running. Martin stresses that when this occurs, withdrawal symptoms begin to appear and the compulsion to resume the activity is very strong, but the body may not be able to cooperate because of the injury. During step eight some soul-searching may begin. This self-assessment of the addict's behavior could be brought on by the injury and withdrawal symptoms, causing the addict to possibly seek help from a physician, friend or counselor. Stage nine is where the addict makes a choice. After the addict reviews what has taken place, the person will either compulsively try to continue the former level of running, substitute a new activity that does not require the same physical demands, but still gives satisfaction, give up all activity, or attempt some type of moderation.

Between Morgan (1979) and Martin (1990), other researchers (Sachs, 1981; Sacks, 1981; Sachs and Pargman, 1979, 1984) have developed their philosophies on running addiction. Sachs (1981) states that although running may generally be classified as positive, abuse may

manifest when participation in running becomes compulsive, habitual, and addictive. Withdrawal symptoms become immediately apparent and generally powerful, when days of scheduled runs are missed. The runner's life is virtually molded around the "daily run" as variances in eating and sleeping schedules, leisure time activities (e.g. more time devoted to long weekend runs and races) and time spent with friends and family members begins to change. Running has now moved from an important aspect of one's existence, to a controlling factor, eliminating other choices in life until the need to run becomes omnipresent. In addition to this, heavy training also takes its toll leaving the runner with a decreased ability to concentrate, fatigue, listlessness, constant thought about running to perhaps even skipping appointments to run. Sachs acknowledges that the addict may recognize the irrationality of these feelings and thoughts, but they are inescapable and can only be relieved by running (Sachs, 1981).

Sacks (1981) has found some of the same characteristics that Sachs (1981) has discovered among addicted runners. The scheduled daily run preempts important social and vocational commitments, causing family, friendships and work to suffer. Addicted runners may radically alter their lifestyle to accommodate the priority of their running interest which could include changes in choice of friends, diet, clothing, and even career. Sacks adds that a frequent solution to stress in addicted runners is to daydream about

running, which includes focusing on pleasurable feelings of rhythmic movement, physical strength, or competitive victories associated with a race. When fantasizing, the individual possesses a feeling of specialness and of uniqueness, or the person may chose to dwell on the memory of euphoric experiences during past runs. "Many individuals who turn to running as a regular source of exercise during periods of stress many become "addicted" to running as a means of resolving conflict" (Sacks, 1981, p. 129).

Sachs (1981) believes that the basis for forming an addiction to running is adherence. Usually, a time line from four months to two years of running on a regular basis is necessary for an addiction to be present, but a time frame even as short as one month has been cited as adequate for the development of running addiction (Sachs, 1981). Sachs and Pargman (1984) define "running on a regular basis" as ranging anywhere from running twice a day (or even more often) seven days a week, to running only once a day a few times per week. The key here in defining running addiction is adherence to one's "regular regimen". The runner has an expectation to run a certain number of times each week and these runs are planned in advance with certain rest days built in (i.e. one runs on Monday, Wednesday, Friday, and Saturday, with the remaining days serving as "off" days) (Sachs and Pargman, 1984). Previously stated was the fact that withdrawal symptoms which manifest themselves within 24-36 hours, play a major role in determining running

addiction. However, these withdrawal symptoms should not be expected to be present on days that the runner has already predetermined as "rest" days. For example, if the individual runs Monday at 7:00 am, then is not scheduled to run again until Wednesday at 5:00 pm, no withdrawal symptoms shall be expected to occur even though 24-36 hours has elapsed. However, if an individual had planned to run on a given day and found, for whatever reason (perhaps pressing familial or work responsibilities) that running was not possible, then withdrawal symptoms would be expected (Sachs and Pargman, 1984).

As examined by several researchers, it can be seen that the methods by which running addiction occurs have similarities and differences. Sachs and Pargman (1979) believe that the precise qualitative and quantitative characteristics of the addicting activity remain to be determined.

Indeed there is much that remains to be determined about running addiction. As alluded to earlier, it is not fully understood why some people engage in different addictions, such as alcohol, drugs, food, gambling, etc., but some theories have been examined.

Adult Children of Alcoholics

Several authors (Ackerman, 1983; Fields, 1992; Sell, 1989; Woititz, 1983) reveal that certain individuals may be predisposed to addiction because of characteristics they

developed from being reared in a home where one or both parents were alcoholics. To better understand why this predisposition exists, a brief overview of the basic aspects of personality development will be presented.

Personality Development

Ackerman (1983) states that all theories concur that much of one's personality is an accumulation of life experiences and these experiences can be divided into stages. Each stage acts as a building block for another and has specific crises and conflicts which must be overcome by the individual so that adequate development may be achieved. If a child has unsolved problems left over from previous stages in this developmental process, it can have grave consequences for adequate personality development. For the child who has an alcoholic parent, additional stressors are added to these stages and must be overcome to ensure normal development (Ackerman, 1983).

Springle (1990) states that the basic needs of a human being are love, security, worth, provision and protection. Springle (1990) further states that consistent, loving discipline is extremely important to the development of children because without it, they have no boundaries and no clear sense of right or wrong. Fields (1992) reveals that most functional families provide structure, discipline and natural consequences for their children's behavior, but alcoholic families provide rigidity, control, fear,

immaturity, irresponsibility, and most importantly, unpredictability. Springle (1990) says that children need attention, comfort, affirmation, warmth and time so they will believe that they are valuable, special people. Children who grew up in alcoholic families experienced the trauma of boundary inadequacy, shame, abandonment, rejection, abuse, violation and inconsistent and imbalanced parenting (Fields, 1992).

Parents are instrumental in the roles they play in terms of fostering a child's development. Sell (1989) believes that parents are the major sculptors in the lives of their children and that other events and persons chip away at the individuals to mold them into what they are today. Ackerman (1983) affirms that children look to the family for security, but in those families where there was an alcoholic parent, that security may not have been there.

Woititz (1983) believes that normal development is sometimes denied to the child of an alcoholic because the parents are so absorbed in the madness of alcoholism that they had neither the time nor the energy to discuss common, everyday issues with the child. For example, it is normal for a child to look to the parents for guidance and to ask them how to handle certain aspects of life. Even if only one parent is the alcoholic, the other may very well be so preoccupied with the drinker that no time or emotional availability exists for the child. This absence can play havoc in the life of the adult child of the alcoholic

because Woititz (1983) believes that childhood thoughts, feelings, experiences and assumptions are carried with that person in one form or another, throughout life. Carroll (1989) reiterates this philosophy by stating that the characteristics which these adult children of alcoholics have developed as coping mechanisms often extend into adulthood and contribute to problem-producing and maladaptive behaviors that threaten effective living.

Kritsberg (1985) introduces the alcoholic family as a compulsive-addictive one, and the children from this family learn compulsive-addictive behavior. This behavior is learned as children and without intervention, the behavior will continue on this course of action until they die (Kritsberg, 1985). Thus, it stands to reason among experts in the field that it is very difficult for a child to develop normally in a home where alcoholism is present (Dintiman and Greenberg, 1983).

Sell (1989) notes how those families where alcoholism reigned seem to reproduce in kind. For example, alcoholic families tend to breed alcoholic families which gives birth to a powerful cycle. This is not to say that every adult child of an alcoholic actually becomes an alcoholic, but it's likely that one from such a home will possess traits that threaten the welfare of that individual's family (Sell, 1989). While current statistics reveal that over 28 million Americans have at least one alcoholic parent, it is evident

that this cycle need not be continuously reproduced (Fields, 1992).

Characteristics of Adult Children of Alcoholics

Children being reared in the alcoholic family systems experience traumas that result in specific adult behavioral characteristics (Fields, 1992). Sell (1989) describes ACA's as being compulsive, obsessive, perfectionists, over-responsible, controlling, workaholics, people-pleasers, perfectionists, and procrastinators. Sell (1989) further describes ACA's as having unrealistic expectations, mercilessly judging themselves when they fail to measure up, and living by a lot of "oughts" and "shoulds". Fields (1992) states that ACA's have difficulty relaxing, demonstrate compulsive behavior, are addicted to excitement, tend to think in absolutes ("black or white" thinking), and fear losing control. Woititz (1983) sums up a few observations of the characteristics of ACA's as follows: they tend to have difficulty having fun; they take themselves very seriously and may overreact to changes which they have no control over. Friel and Friel (1988) refer to the family dynamics as a basis for leading ACA's into addiction and compulsive behavior. Hemfelt and Fowler (1990) believe that addictive agents, such as exercise addiction, can evolve from families where one or both parents were alcoholics.

The above statements are not an indictment, but merely a description of the characteristics of adult children of alcoholics as composited by several researchers in the field. Granted, these characteristics may be present in all persons to a certain degree, but tend to be more dominant in the adult child of an alcoholic. The reasons for this may be traced back to Ackerman's (1983) theory on personality development. The additional stressors brought on by parental alcoholism may have stunted growth at any given stage throughout the child's emotional development. As a result, conflicts which could normally be handled at a given stage may have become insurmountable because the child's developmental level was not sufficient to overcome these conflicts. As the child matures, the foundation for problem solving will likely be under-developed, thus compounding the ability to cope with future crises. Whatever coping mechanisms were learned may not be healthy ones, but nonetheless, these mechanisms are still present in the adult child of an alcoholic. For example, if the child's parents were in the midst of a fight and objects were being hurled around the living room, perhaps the child fled to the bedroom to avoid getting hurt. This is a vital and quite logical coping mechanism for the child at the time; however, when the child becomes an adult, if development stopped in this stage, the only way the adult child knows how to deal with conflict is to "run away". This example may explain the basis of how the characteristics of ACA's develop.

Another example related to present character development can be seen through Woititz's work. Woititz (1983) states that if criticism avails during childhood, a standard of perfection may be internalized by the child. For a child, the feelings of every accomplishment never quite being good enough, can translate into perfectionism and ruthless judgement of self during adulthood. Sell (1989) believes that perfectionism is caused by the impossible external standards that the adult child has constructed because the individual is deathly afraid of failure since self-worth is measured by success.

Another root in character development may be seen when the individual's childhood life was very serious, angry business and the joys discovered through the parents' laughing and joking gave way to the parents' fussing and fighting (Woititz, 1983). Perhaps the child internalized that it wasn't okay to have fun or to be carefree and as a result, the adult child now takes life very seriously and may have difficulty having fun (Woititz, 1983).

Still another rationale for character development lies in the theory that children from alcoholic families learn to distrust their own observations, such as what they see, hear, and feel (Fields, 1992). This could be due to the failure of parents to validate any normal feelings that their children have or may be it is due to the double messages these children grow up with (e.g. I love you; go away) (Woititz, 1983). When contradictory statements are

made to the child on a consistent basis, this causes the sense of self to become distorted and the child doesn't know what to believe (Woititz, 1983). The child is then left at guessing what is normal, even into adulthood (Fields, 1992).

Friel and Friel (1988) see low self-esteem as being a dominant factor in character development. Woititz (1983) believes that in order to measure self-esteem, a child must have a sense of self. Sell (1989) states that ACA's are externally oriented, meaning that they are preoccupied with another person or circumstance outside themselves that inhibits development of this sense of self. The rationale for this is that the child's needs were sacrificed at the expense of the troubled family member's needs. For example, instead of being comforted when fearful, the child must help mom handle her terror of dad or instead of doing homework, the child is sent to the local bar to get dad. All these factors could hinder the total development of self. To defend oneself from the pain and emptiness of being nothing, that person finds a way through external means to be someone; however, this renders the person dependent upon circumstances that cannot always be controlled (Sell,1989). For instance, suppose that a person choses running as an external means to validate the sense of self. This may provide a strong sense of self until the running is taken away by an injury or other unforeseen happenings. This is why the external cannot be substituted for what is lacking internally. The external will never be enough to complete

one's sense of worth and dignity because it operates under the false assumption that "just a little bit more" will ensure wholeness of self (Sell, 1989). Ackerman (1983) refers to the validation of self through external means as sublimation, which involves directing feelings of discomfort or anxiety to acceptable activities that are seen as positive. Taking the example of running, because of the benefits involved, it is usually viewed as a positive activity. However, simply because an activity may be positive, doesn't exempt it from becoming negative if used to validate self-worth. Woititz (1983) affirms that it is difficult for ACA's to believe that they can be accepted because of who they are and that acceptance does not have to come from external sources.

Clearly, the development of character can take on many different forms for the ACA, yet it can be agreed upon that living with an alcoholic is indeed a family affair, subjecting all members of the household to constant stress and fears of various kinds (Ackerman, 1983). Woititz (1983) states that the specific happenings may differ but, in general, one alcoholic home environment is like another with an ever-present undercurrent of tension and anxiety. Carroll (1989) further elaborates that each member of the family can be victimized by the disruptive effects of alcoholism on the attitudes, values, unity and stability of the family system. Kritsberg (1985) attributes the common characteristics of ACA's to a host of shared experiences

which result from being reared in an alcoholic family. It is a combination of these shared experiences and the resulting emotional baseline of fear, hurt and anger that remain the true common denominator (Kritsberg, 1985).

However, even with the multitude of similarities within alcoholic families, each ACA is unique. Not all ACA's are affected in similar manner (Ackerman, 1983). It depends on the type of alcoholic in the home, the degree of alcoholism and the individual perception of potential harm from living with an alcoholic (Ackerman, 1983).

As reflected on previously, the effects of parental alcoholism do not dissipate when the offspring leaves the home, but once patterns have been established they may continue throughout adulthood (Ackerman, 1983). Thus, this could be a dominant factor in understanding why and how various addictions may develop later in life. As Friel and Friel (1988) state, addictions are actually symptoms of a deep-seated underlying dependency that evolved out of the family systems during childhood.

Summary

In summary, it can be seen how running can progress from a positive, beneficial activity to a negative, all-consuming destruction for adult children of alcoholics. This is not to say that every ACA abuses running, but due to certain personality characteristics, running may be used to validate self-worth instead of enhance it. This would

partially explain why running could become so "omnipresent", addictive and deemed necessary to cope with daily life at the expense of family, friends, employment and even one's own physical well-being.

CHAPTER III

METHODS AND PROCEDURES

This chapter contains the methods and procedures section which includes subject selection, instrumentation and statistical analysis.

Subject Selection

A total of 60 male and female subjects between 17 and 57 years old were used in this study. Initially, 64 subjects volunteered to fill out questionnaires; however, four subjects had missing pertinent data and were not used in this study. Three additional subjects failed to complete the CAF and were not used when comparing the ACA's to the non-ACA's based on this item; however, these three subjects were used when comparing the ACA's vs. non-ACA's according to the CAST.

Subjects were solicited from the Stillwater Running Club, Baton Rouge, La. Running Club, Oklahoma State University track team, faculty and staff and various Leisure activity classes at Oklahoma State University, and from other runners who did not fit into the above categories. The criteria for participation in this study was highly subjective in that one need only classify oneself as a

runner. These runners ranged anywhere from recreational joggers to highly competitive racers.

Instrumentation

The questionnaire that had been administered was a one page paper and pencil type survey which actually contained three diagnostic tests. The first was the Children of Alcoholics Screening Test (CAST), a 30 item questionnaire in which participants responded by checking yes or no beside each question. The purpose of this test was to identify people who are living with or who have lived with alcoholic parents (Pilat and Jones, 1985, in Robinson 1989). The CAST measured feelings, attitudes, perceptions, and experiences related to parental drinking and has proven reliability and validity (Robinson, 1989). The second test, the Children from Alcoholic Family (CAF) item also identified adult children of alcoholics. This test consisted of a single question that was answered by circling one of the three given choices. The CAF has been used by the Cambridge and Somerville Program for Alcoholism Rehabilitation (CASPAR) which has proven reliability and validity. The last part of the questionnaire consisted the Running Addiction Scale (RAS). The RAS is an 11 question test, asking subjects to respond by using a five point Likert scale from strongly agree to strongly disagree. Scores can range from a maximum of 55 to a minimum of 11. This RAS has proven reliability

and validity in measuring running addiction (Chapman & de Castro, 1990).

Procedures

A total of 140 questionnaires were dispersed, either personally or via mail, and 64 of them were returned, either personally or via mail, to yield a return rate of 46%. However, since four subjects had missing pertinent data and were not used in this study, the percentage dropped to 43%.

Statistical Analysis

Each test on the questionnaire was scored as follows. Scoring of the 30 item CAST consisted of adding the "yes" answers to yield a total score which can range from 0 to 30. All of the "yes" answers were assigned a value of one and all of the "no" answers were assigned a value of zero. A score form 0 to 1 indicated adult children of nonalcoholics; 2 to 5 indicated adult children of problem drinkers; and 6 or more was indicative of adult children of alcoholics (ACA's) (Robinson, 1989). Scoring of the CAF consisted of taking the one answer to that question at face value. If participants answered "yes", they were diagnosed as ACA's. If they answered anything else, they were diagnosed as non-ACA's. The only variables considered from the CAST and the CAF were adult children of alcoholics and adult children of non-alcoholics. The 11 item RAS was scored using a five point Likert scale, with a five assigned to "strongly agree"

and a one assigned to "strongly disagree". Items number two, three, four, six and seven had to be reversed in their assigned numerical values (i.e. a five equaled a one, a four equaled a two, etc.). Scores could range from a maximum of 55 to a minimum of 11.

To allow for clearer distinction between the addicted and non-addicted categories without excluding a large percentage of the subjects, the RAS scores were dichotomized by the author. The upper 40% and the lower 40% of the scores were utilized while leaving out the middle 20%. The upper 40% of the scores were used to classify those subjects who score 37 or more as being addicted to running. Those in the lower 40% who score 28 or below were classified as not addicted to running. These scores were used as a base to compare the ACA group verses the non-ACA group in terms of running addiction.

The statistical method that was chosen to compare the ACA group verses the non-ACA group based on their RAS scores was the t-test. The t-test was conducted twice; once using the scores from the CAST, then again using the scores from the CAF item to see if both analysis led in the same direction. The .05 level of significance was established as the level of acceptance or rejection of the hypotheses. The statistical computations were carried out using the SPSS computing program at Oklahoma State University.

CHAPTER IV

RESULTS AND DISCUSSION

The purpose of this study was to determine if people who come from families where one or both parents were alcoholics tend to become addicted to running. The results from comparing the CAST and the RAS, then the CAF and the RAS will be covered in this section. A complete discussion of the results will follow.

Results

Children of Alcoholics Screening Test (CAST) and Running Addiction Scale (RAS) comparison

According to the CAST, there were 46 cases of non-ACA's and 14 cases of ACA's. The mean score on the RAS for the non-ACA's was 37.08 and the standard deviation was 5.26. The mean score on the RAS for the ACA's was 40.93 and the standard deviation was 5.06. The t-value was -2.41 which yielded a significant difference at the .05 level in favor of the ACA group over the non-ACA group.

Children of Alcoholic Family Item(CAF) and Running Addiction Scale (RAS) comparison

According to the CAF there were 39 cases of non-ACA's and 18 cases of ACA's. The mean score on the RAS for the

non-ACA's was 37.28 and the standard deviation was 5.97. The mean score on the RAS for the ACA's was 39.56 and the standard deviation was 4.08. The t-value was -1.46 which did not yield a significant difference at the .05 level. Please refer to Table I below for a comparison of the CAST and CAF scores.

TABLE I

COMPARISON OF THE CAST AND CAF SCORES

Test	N	RAS Mean	S.D.	t-value	Level of Significance
CAST non-ACA's	46	37.08	5.26		
CAST ACA's	14	40.93	5.06	-2.41	.05
CAF non-ACA's	39	37.28	5.97		
CAF ACA's	18	39.56	4.08	-1.46	NS

Discussion

The CAST did show ACA's and non-ACA's had different levels of addiction to running. Although the mean score of 37.08 on the RAS would classify the non-ACA's as being addicted to running (according to the functional definition of an addicted runner) the mean score of 40.93 on the RAS

classifies the ACA's as significantly higher. This reveals that the ACA's had a higher level of addiction than the non-ACA's, which is congruent with the theory that ACA's tend to develop compulsive-addictive behavior (Kritsberg, 1985). Friel and Friel (1988) agree with the theory as they adhere to the family dynamics as a basis for leading ACA's into compulsive-addictive behavior. Hemfelt and Fowler (1990) believe that one of the ways to manifest that addictive behavior is through exercise. These researchers back the results of this study that ACA's, as diagnosed by the CAST, are more addicted to running than non-ACA's.

The CAF also depicted the ACA's mean score on the RAS as being higher than the non-ACA's mean score. However, the CAF did not yield the same results as the CAST did. Perhaps this is consistent with a report from one study in Robinson (1989) on the CAST as having accurately identified 100% of a group of individuals from alcoholic families who had been clinically diagnosed by psychiatrists, counselors, and psychologists. The CAF; however, has been reported to only identify 83% of those persons from alcoholic families who were identified as such by the clinical staff (Robinson, 1989).

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter contains a summary of the study, the findings as depicted by the statistical analysis, conclusions, and recommendations for future study.

Summary

The primary purpose of this study was to determine if people who come from families where one or both parents were alcoholics tend to become addicted to running. The CAST and the CAF items were used to determine if an individual came from a family where one or both parents was an alcoholic. The RAS was used to determine running addiction. A total of 60 subjects, male and female, were used. Subjects volunteered to participate and were solicited from the following sources: the Stillwater Running Club, Baton Rouge, La. Running Club, Oklahoma State University track team, faculty and staff and various Leisure activity classes at Oklahoma State University, and from other runners who did not fit into the above categories. These subjects were all administered the CAST, the CAF and the RAS.

According to the CAST, a significant difference in RAS scores between non-ACA's and ACA's was found at the .05

level in favor of the ACA's. According to the CAF, no significant difference in RAS scores between non-ACA's and ACA's was found.

Findings

The data collected from this study was analyzed using the SPSS computing program and yielded the following findings:

Hypothesis 1. There will be no significant difference in the Running Addiction Scale (RAS) scores between adult children of alcoholics (ACA's) and adult children of non-alcoholics (non-ACA's) as measured by the Children of Alcoholics Screening Test (CAST). Hypothesis 1 was rejected as a significant difference in the RAS scores was found between ACA's and non-ACA's at the .05 level in favor of the ACA's.

Hypothesis 2. There will be no difference in the RAS scores between ACA's and non-ACA's as measured by the Children from Alcoholic Family (CAF) item. Hypothesis 2 was accepted as there was no significant difference in the RAS scores between ACA's and non-ACA's according to the CAF at the .05 level.

Conclusions

Based on the findings, the following conclusions were made:

1) When using the CAST, ACA's are more addicted to running than non-ACA's.

2) The CAST was found to be more accurate than the CAF when diagnosing ACA's.

Recommendations

In review of the methods, procedures and result of this study, the author recommends the following:

1. Subject selection may be expanded to include different geographical regions of the United States. Ideally, runners from all 50 states should be included.
2. Subjects may be limited to elite runners only.
3. The number of subjects may be increased to at least 100.
4. This study may be replicated by administering questionnaires to those who classify themselves as ACA's instead of as runners.
5. This study may be replicated by expanding the sample group to include subjects who engage in other aerobic exercises such as: cycling, swimming and aerobic dance.
6. This study may be replicated by comparing male and female ACA's in terms of running addiction.

BIBLIOGRAPHY

Ackerman, R. J. (1983). Children of alcoholics: A guide for parents, educators, and therapists. New York: Simon and Schuster, Inc.

Berube, M. S. & DeVinne, P. B. (Eds.). (1985). The american heritage dictionary (2nd ed.). Boston: Houghton Mifflin Company.

Carmack, M. A. & Martens, R. (1979). Measuring commitment to running: A survey of runners attitudes and mental states. Journal of Sport Psychology, 1, 25-42.

Carroll, C. R. (1989). Drugs in modern society. Dubuque, IA: Wm. C. Brown.

Chapman, C. L., & deCastro, J. M. (1990). Running addiction: Measurement and associated psychological characteristics. The Journal of Sportsmedicine and Physical Fitness, 30(8), 283-290.

DeBenedette, V. (1990). Are your patients exercising too much? The Physician and Sportsmedicine, 18(8), 119-122.

Dintiman, G. B. & Greenberg, J. S. (1983). Health Through discovery. Reading, MA: Addison-Wesley.

Fahey, T. D. (1989). Basic weight training. Mountain View, CA: Mayfield.

Fields, R. (1992). Drugs and alcohol in perspective. Bellevue, WA: Wm. C. Brown.

Friel, J., & Friel, L. (1988). Adult children: The secrets of dysfunctional families. Deerfield Beach, FL: Health Communications.

Glasser, W. (1976). Positive addiction. New York: Harper & Row.

Hailey, B. J. & Bailey, L. A. (1982). Negative addiction in runners: A quantitative approach. Journal of Sport Behavior, 5(3), 150-154.

Hemfelt & Fowler (1990). Serenity: A companion for twelve step recovery. Nashville: Thomas Nelson.

Hoeger, W. K. (1991). Principles and labs for physical fitness and wellness. Englewood, CO: Morton.

Kritsberg, W. (1985). The adult children of alcoholics syndrome. New York: Bantam.

Martin, G. (1990). When good things become addictions. Wheaton, IL: Victor Books.

Morgan, W. P. (1979). Negative addiction in runners. The Physician and Sportsmedicine, 7(2), 57-70.

Nieman, D. C. (1990). Fitness and sports medicine: An introduction. Palo Alto, CA: Bull.

Peele, S. (1979). Redefining addiction II: The meaning of addiction in our lives. Journal of Psychedelic Drugs, 11(4), 289-297.

Robinson, B. E. (1989). Working with children of alcoholics. Lexington, MA: Lexington Books.

Rudy, E. B. & Estok, P. J. (1989). Measurement and significance of negative addiciton in runners. Western Journal of Nursing Research, 11(5), 548-558.

Rudy, E. B. & Estok, P. J. (1990). Running addiction and dyadic adjustment. Research in Nursing and Health, 13, 219-225.

Sachs, M. L. (1981). Running addiction. In M. H. Sacks & M. L. Sachs (Eds.), Psychology of running (pp. 116-126). Champaign, IL: Human Kinetics Publishers, Inc.

Sachs, M. L., & Pargman, D. (1979). Running addiction: A depth interview examination. Journal of Sport Behavior, 2(3), 143-155.

Sachs, M. L., & Pargman, D. (1984). Running addiction. In M. L. Sachs (Ed.), Running as therapy (pp. 231-252). Lincoln, NE: University of Nebraska Press.

Sacks, M. H. (1981). Running addiction: A clinical report. In M. H. Sacks & M. L. Sachs (Eds.), Psychology of running (pp.127-130). Champaign, IL: Human Kinetics Publishers, Inc.

Sell, C. (1989). Unfinished business: Helping adult children resolve their past. Portland, OR: Multnomah Press.

Springle, P. (1990). Codependency. Dallas: Rapha.

Thompson, C. F. (1990, December). Too much exercise [Letter to forum]. The Physician and Sportsmedicine, 18(8), 119-122.

Woititz, J. G. (1983). Adult children of alcoholics. Deerfield Beach, FL: Health Communications.

APPENDIXES

APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
FOR HUMAN SUBJECTS RESEARCH

Proposal Title: The Relationship Between Parental Alcoholism and the Behavioral Aspects of Running

Principal Investigator: Steven Edwards / Ladona Tornabene

Date: 4-23-92 IRB # ED-92-049

This application has been reviewed by the IRB and

Processed as: Exempt [X] Expedite [ ] Full Board Review [ ]

Renewal or Continuation [ ]

Approval Status Recommended by Reviewer(s):

Approved [X] Deferred for Revision [ ]

Approved with Provision [ ] Disapproved [ ]

Approval status subject to review by full Institutional Review Board at next meeting, 2nd and 4th Thursday of each month.

Comments, Modifications/Conditions for Approval or Reason for Deferral or Disapproval:

Comment;

Change the name in instructions from "Marcia Tilley" to Beth McTernan.

Signature: Marcia K. Tilley Date: _____

Chair of Institutional Review Board

IRB # ED-92-049

APPLICATION FOR REVIEW OF HUMAN SUBJECTS RESEARCH
(PURSUANT TO 45 CFR 46)
OKLAHOMA STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD

Title of project (please type): The Relationship Between Parental Alcoholism and the Behavioral Aspects of Running

Please attach copy of project proposal.

I agree to provide the proper surveillance of this project to ensure that the rights and welfare of the human subjects are properly protected. Additions to or changes in procedures affecting the subjects after the project has been approved will be submitted to the committee for review.

PRINCIPAL INVESTIGATOR(S): (If student, list advisor's name first)

Typed Name	Signature
Steven W. Edwards, Ph.D.	Steven W. Edwards
Ms. Ladona Tornabene	Ladona Tornabene

School of HPEL — Department
Education — College
PEC 103 — Faculty Member's Campus Address
X45500 — Campus Phone Number

TYPE OF REVIEW REQUESTED: [XX] EXEMPT [ ] EXPEDITED [ ] FULL BOARD
(Refer to OSU IRB Information Packet or the OSU IRB Brochure for an explanation of the types of review.)

1. Briefly describe the background and purpose of the research.

The benefits of running may be offset when running is abused to the point where it becomes an addiction. The purpose of this research is to determine if addicted runners come from families where alcohol was abused by one or both parents.

APPENDIX B

OPINION SURVEY

OPINION SURVEY

PLEASE CHECK THE ANSWER BELOW THAT BEST DESCRIBES YOUR FEELINGS, BEHAVIOR, AND EXPERIENCES RELATED TO A PARENT'S ALCOHOL USE. TAKE YOUR TIME AND BE AS ACCURATE AS POSSIBLE. ANSWER ALL THIRTY QUESTIONS BY CHECKING EITHER "YES" OR "NO".

Sex: Male____ Female____ Age____

Yes	No	Questions
___	___	1. Have you ever thought that one of your parents had a drinking problem?
___	___	2. Have you ever lost sleep because of a parent's drinking problem?
___	___	3. Did you ever encourage one of your parent's to quit drinking?
___	___	4. Did you ever feel alone, scared, nervous, angry, or frustrated because a parent was not able to stop drinking?
___	___	5. Did you ever argue or fight with a parent when he or she was drinking?
___	___	6. Did you ever threaten to run away from home because of a parent's drinking?
___	___	7. Has a parent ever yelled at or hit you or other family members when drinking?
___	___	8. Have you ever heard your parents fight when one of them was drunk?
___	___	9. Did you ever protect another family member from a parent who was drinking?
___	___	10. Did you ever feel like hiding or emptying a parent's bottle of liquor?
___	___	11. Do many of your thoughts revolve around a problem drinking parent or difficulties that arise because of his or her drinking?
___	___	12. Did you ever wish that a parent would stop drinking?
___	___	13. Did you ever feel responsible for and guilty about a parent's drinking?
___	___	14. Did you ever fear that your parents would get divorced due to alcohol misuse?
___	___	15. Have you ever withdrawn from and avoided outside activities and friends because of embarrassment and shame over a parent's drinking problem?
___	___	16. Did you ever feel caught in the middle of an argument or fight between a problem drinking parent and your other parent?
___	___	17. Did you ever feel that you made a parent drink alcohol?
___	___	18. Have you ever felt that a problem drinking parent did not really love you?
___	___	19. Did you ever resent a parent's drinking?
___	___	20. Have you ever worried about a parent's health because of his or her alcohol use?
___	___	21. Have you ever been blamed for a parent's drinking?
___	___	22. Did you ever think your father was an alcoholic?
___	___	23. Did you ever wish your home could be more like the homes of your friends who did not have a parent with a drinking problem?
___	___	24. Did a parent ever make promises to you that he or she did not keep because of drinking?
___	___	25. Did you ever think your mother was an alcoholic?
___	___	26. Did you ever wish that you could talk to someone who could understand and help the alcohol-related problems in your family?
___	___	27. Did you ever fight with your brothers and sisters about a parent's drinking?
___	___	28. Did you ever stay away from home to avoid the drinking parent or your other parent's reaction to the drinking?
___	___	29. Have you ever felt sick, cried, or had a "knot" in your stomach after worrying about a parent's drinking?
___	___	30. Did you ever take over any chores and duties at home that were usually done by a parent before he or she developed a drinking problem?

PLEASE CIRCLE THE CORRECT ANSWER

Have you ever wished that either one or both of your parents would drink less?
1. Parent's don't drink at all. 2. Yes 3. No

PLEASE PLACE A CHECK MARK IN THE APPROPRIATE SQUARE WHICH CORRESPONDS TO EACH OF THE FOLLOWING STATEMENTS. THANK YOU!!

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. I run on a regular basis.	[]	[]	[]	[]	[]
2. If the weather is too cold, too hot, or too windy, I will not run that day.	[]	[]	[]	[]	[]
3. I would not reschedule activities with my friends in order to run.	[]	[]	[]	[]	[]
4. I have stopped running for a period of at least a week for a reason other than an injury.	[]	[]	[]	[]	[]
5. I would run with intense pain.	[]	[]	[]	[]	[]
6. I have not spent much money on running literature or equipment and accessories.	[]	[]	[]	[]	[]
7. If there were another way to maintain my present physical fitness, I would not run anymore.	[]	[]	[]	[]	[]
8. After I run I "feel" better.	[]	[]	[]	[]	[]
9. I would continue to run while an injury healed.	[]	[]	[]	[]	[]
10. On some days, even though I do not feel like running, I do anyway.	[]	[]	[]	[]	[]
11. I feel that I need to run at least once everyday.	[]	[]	[]	[]	[]

STOP! HAVE YOU ANSWERED ALL QUESTIONS?

APPENDIX C

CONSENT FORM

PLEASE READ THE FOLLOWING PARAGRAPHS BEFORE PROCEEDING TO THE FOLLOWING PAGE.

Dear Participant:

My name is Ladona Tornabene and I am an avid runner and triathlete. I am a graduate student at Oklahoma State University and am presently conducting an opinion survey which I've enclosed. Please return this questionnaire in the stamped addressed envelope within **seven (7) days.** Your participation is voluntary and I have obtained your name from a list of runners affiliated with TAC from the Oklahoma area.

The purpose of this survey is to assist me in a research project for a master's thesis. Some of these questions pertain to your family of origin and your running behavior. There may be some questions sensitive in nature and I assure you that your answers will be confidential.

You may contact me at telephone number 1-405-744-5507 in Colvin Center Room 115A Oklahoma State University, Stillwater, OK 74078, should you wish further information about the research. You may also contact Beth McTernan, University Research Services, 001 Life Sciences East, Oklahoma State University, Stillwater, OK 74078; Telephone: (405) 744-5700.

Thank you,

Ladona Tornabene

APPENDIX D

RUNNING ADDICTION SCALE

RUNNING ADDICTION SCALE (RAS)

1. I run on a regular basis.

2. If the weather is too cold, too hot, or too windy, I will not run that day.

3. I would not reschedule activities with my friends in order to run.

4. I have stopped running for a period of at least a week for a reason other than an . injury

5. I would run with intense pain.

6. I have not spent much money on running literature or equipment and accessories.

7. If there were another way to maintain my present physical fitness, I would not run anymore.

8. After I run I "feel" better.

9. I would continue to fun while an injury healed.

10. On some days, even though I do not feel like running, I do anyway.

11. I feel that I need to run at least once everyday.

Chapman, C. L., & deCastro, J. M. (1990). Running addiction: Measurement and associated psychological characteristics. The Journal of Sports Medicine and Physical Fitness, 30(3), 283-290.

APPENDIX E

CAST QUESTIONNAIRE

CHILDREN OF ALCOHOLIC SCREENING TEST (CAST)

Please check the answer below that best describes your feelings, behavior, and experiences related to a parent's alcohol use. Take your time and be as accurate as possible. Answer all thirty questions by checking either "Yes" or "No".

Sex: Male___ Female___ Age:____

Yes	No	Questions
___	___	1. Have you ever thought that one of your parents had a drinking problem?
___	___	2. Have you ever lost sleep because of a parent's drinking problem?
___	___	3. Did you ever encourage one of your parents to quit drinking?
___	___	4. Did you ever feel alone, scared, nervous, angry, or frustrated because a parent was not able to stop drinking?
___	___	5. Did you ever argue or fight with a parent when he or she was drinking?
___	___	6. Did you ever threaten to run away from home because of a parent's drinking?
___	___	7. Has a parent ever yelled at or hit you or other family members when drinking?
___	___	8. Have you ever heard your parents fight when one of them was drunk?
___	___	9. Did you ever protect another family member from a parent who was drinking?
___	___	10. Did you ever feel like hiding or emptying a parent's bottle of liquor?
___	___	11. Do many of your thoughts revolve around a problem drinking parent or difficulties that arise because of his or her drinking?
___	___	12. Did you ever wish that a parent would stop drinking?
___	___	13. Did you ever feel responsible for and guilty about a parent's drinking?
___	___	14. Did you ever fear that your parents would get divorced due to alcohol misuse?
___	___	15. Have you ever withdrawn from and avoided outside activities and friends because of embarrassment and shame over a parent's drinking problem?
___	___	16. Did you ever feel caught in the middle of an argument or fight between a problem drinking parent and your other parent?
___	___	17. Did you ever feel that you made a parent drink alcohol?
___	___	18. Have you ever felt that a problem drinking parent did not really love you?
___	___	19. Did you ever resent a parent's drinking?

___ ___ 20. Have you ever worried about a parent's health because of his or her alcohol use?
___ ___ 21. Have you ever been blamed for a parent's drinking?
___ ___ 22. Did you ever think your father was an alcoholic?
___ ___ 23. Did you ever wish your home could be more like the homes of your friends who did not have a parent with a drinking problem?
___ ___ 24. Did a parent ever make promises to you that he or she did not keep because of drinking?
___ ___ 25. Did you ever think your mother was an alcoholic?
___ ___ 26. Did you ever wish that you could talk to someone who could understand and help the alcohol-related problems in your family?
___ ___ 27. Did you ever fight with your brothers and sisters about a parent's drinking?
___ ___ 28. Did you ever stay away from home to avoid the drinking parent or your other parent's reaction to the drinking?
___ ___ 29. Have you ever felt sick, cried, or had a "knot" in your stomach after worrying about a parent's drinking?
___ ___ 30. Did you ever take over any chores and duties at home that were usually done by a parent before he or she developed a drinking problem?

Robinson, B.E. (1989). Working with children of alcoholics. Lexington, MA: Lexington Books.

APPENDIX F

CAF ITEM SURVEY

CHILDREN FROM ALCOHOLIC FAMILY ITEM (CAF)

Please circle your answer to the following question.

Have you ever wished that either one or both of your parents would drink less?
1. Parents don't drink at all
2. Yes
3. No

Robinson, B.E. (1989). Working with children of alcoholics. Lexington, MA: Lexington Books.

VITA

Ladona Tornabene

Candidate for the Degree of

Master of Science

Thesis: THE RELATIONSHIP BETWEEN PARENTAL ALCOHOLISM AND THE BEHAVIORAL ASPECTS OF RUNNING ADDICTION

Major Field: Health, Physical Education and Leisure

Area of Specialization: Health Promotion

Biographical:

Personal Data: Born in New Orleans, Louisiana, April 8, 1962, the daughter of John and Mary Tornabene.

Education: Graduated from Bonnabel High School, Kenner, Louisiana, in January, 1980; received Bachelor of Science Degree in Physical Education at Louisiana State University in May, 1988; completed requirements for Master of Science Degree at Oklahoma State University in July, 1992.

Professional Experience: Health/Science Coordinator, Louisiana State University, Baton Rouge, Louisiana, 1984-86; Camp Counselor/Director, Baton Rouge Parks and Recreation, Baton Rouge, Louisiana, 1986-87; Supervisor, Baton Rouge Parks and Recreation, Baton Rouge, Louisiana, 1988-89; Walking Club Coordinator, Oklahoma State University, 1990-91; Graduate Teaching Assistant, Oklahoma State University, 1990-92.

Presentations: Thesis, Research Symposium, Oklahoma State University, April, 1992.

Professional Organizations: Oklahoma Association for Health, Physical Education and Dance; Health, Physical Education and Leisure Science Club, Phi Epsilon Kappa, Alpha Lambda Delta.