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PARATORE, JEAN. Superstitions of Athletes. (1974)
Directed by: Dr. Pearl Berlin. Pp. 76.

Fifty-five collegiate athletes (31 males and 24 females), basketball and tennis players from teams at The University of North Carolina at Greensboro and North Carolina Agricultural and Technical State University, participated in this study which sought to describe athletes' superstitions. More specifically, the inquiry was concerned with (a) the extent of superstitiousness relative to knowledges, practices and beliefs, (b) sex differences in superstitiousness, (c) origins of superstitions, (d) athletes' perceived purposes of superstitions, (e) race differences in superstitiousness and (f) relationship between superstitiousness and need to achieve as measured by the Lynn Questionnaire. A revision of the Gregory form was used to gather data. Information was collected about Ss background, general superstitions and sport-related superstitions.

Findings indicated that athletes who participated in this study affiliate, in varying degrees, with superstitious beliefs and behaviors. General superstitions most frequently acknowledged as "heard of" were black cats and rabbit's foot (52:55). Clothing items and wishing luck (25:55) yielded the highest frequencies for "practice", while a frequency of 9:55 was obtained indicating "belief in" superstitions associated with wishing luck. Findings related to sport superstitions revealed superstitions related to the procedure and positions for taking a free throw in basketball (16:55) as being the most frequently "heard of". The athletes "practiced" superstitions associated with bouncing a basketball before a free throw (8:55) most frequently, while a high frequency of 4:55 was obtained indicating "belief in" superstition related to bouncing a basketball before a free throw.

A

A comparison of male and female superstitiousness revealed greater similarity between the two groups than differences. While females responded with somewhat higher frequencies than males, the superstitions endorsed were generally the same. Friends appeared to be the origin of Ss general superstitions. Origins of sport-related superstitions were most often associated with a circumstantial event. Concerning the purpose of superstitious behaviors, athletes most often endorsed (a) the creation of a right frame of mind and (b) tension reduction. Superstitions endorsed by black and white Ss were generally higher for white Ss at the level of "knowing about" and "practicing" general superstitiousness and also for "knowing about", "practicing" and "believing in" sport-related superstitions.

This thesis has been approved by the following committee of
the Faculty of the Graduate School at the University of North Carolina
at Greensboro:

SUPERSTITIONS OF ATHLETES

by

Jean Paratore

A Thesis Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirement for the Degree
Master of Education

Greensboro
1974

Approved by

Pearl Berlin

Thesis Advisor

This thesis has been approved by the following committee of
the Faculty of the Graduate School at the University of North Carolina
at Greensboro.

He wishes to acknowledge the assistance and cooperation
of the following people:

The students and coaches who volunteered their time in serving
as subjects for the investigation.

His wife, whose typing expertise was invaluable, is
gratefully appreciated.

Thesis Advisor

Pearl Berlin

His many friends whose patience and encouragement have
sustained his spirit's professional and personal activities.

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November 26, 1974
Date of Examination

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	vii
The writer wishes to acknowledge the assistance and cooperation of the following people:	vii
The athletes and coaches who volunteered their time in serving as subjects for the investigation.	1
Arlene Avery, whose typing expertise and generosity is most gratefully appreciated.	2
The many friends whose patience and encouragement have influenced the writer's professional and personal ambitions.	5
Definition of Superstition	6
Origins of Superstition	7
Some Characteristics Associated With the Superstitious Person	10
Superstition in Sport	15
Causes of Sport Superstitions	15
Examples of Sport Superstitions	18
III. PROCEDURES	23
Instrumentation	23
Selection of Subjects	24
Data Gathering	24
Treatment of the Data	26
IV. ANALYSIS OF DATA	28
Summary of Responses	28
Background Information	28
General Superstitions	31
Sport Superstitions	36
Origin of Superstition	50
Purpose of Sport Superstitions	50
Need Achievement and Belief in General Superstition	54
Discussion	54
Differences Between Sexes	54
Differences Between Races	60
Similarities Among All Subjects	61

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	iii
LIST OF TABLES.....	vi
PREFACE.....	vii
CHAPTER	
I. INTRODUCTION.....	1
Statement of the Problem.....	1
Definition of Terms.....	2
Assumptions.....	3
Scope of the Study.....	3
Significance of the Study.....	4
II. REVIEW OF RELATED LITERATURE.....	5
Definition of Superstition.....	5
Origins of Superstition.....	7
Some Characteristics Associated With the Superstitious Person.....	10
Superstition in Sport.....	15
Causes of Sport Superstitions.....	15
Examples of Sport Superstitions.....	18
III. PROCEDURES.....	23
Instrumentation.....	23
Selection of Subjects.....	24
Data Gathering.....	24
Treatment of the Data.....	26
IV. ANALYSIS OF DATA.....	28
Summary of Responses.....	28
Background Information.....	28
General Superstitions.....	31
Sport Superstitions.....	36
Origin of Superstition.....	50
Purpose of Sport Superstitions.....	50
Need Achievement and Belief in General Superstition.....	54
Discussion.....	54
Differences Between Sexes.....	54
Differences Between Races.....	60
Similarities Among All Subjects.....	61

CHAPTER	Page
V. CONCLUSIONS.....	62
Research Conclusions.....	62
Research Implications.....	65
Critique.....	66
BIBLIOGRAPHY.....	69
APPENDIX A: Superstitions of Athletes Questionnaire.....	73

LIST OF TABLES

		Page
TABLE 1	General Background Information--Frequencies of Responses	29
TABLE 2	General Superstitions--Frequencies Reported to be Heard of	32
TABLE 3	General Superstitions--Frequencies Reported to be Practiced	34
TABLE 4	General Superstitions--Frequencies Reported to be Believed	37
TABLE 5	Sport Superstitions--Frequencies Reported to be Heard of	39
TABLE 6	Sport Superstitions--Frequencies Reported to be Practiced	43
TABLE 7	Sport Superstitions--Frequencies Reported to be Believed	47
TABLE 8	Sport Superstition Index for Athlete Subgroups	51
TABLE 9	Origins of General and Sport Superstitions	52
TABLE 10	Purpose of Sport Superstitions--Frequencies Reported	53
TABLE 11	Need Achievement Scores and Frequency of Belief in General Superstition	55
TABLE 12	Means of Need Achievement Scores and Belief in Superstition	57
TABLE 13	Relationship Between Need Achievement and Athlete's Belief in Superstition	58

PREFACE

INTRODUCTION

...superstition is so deeply rooted in our culture that in spite of a century of modern science, there has been surprisingly little change in our reactions to the unknown. We still cling to many of the superstitions learned in childhood (Dukelow, 1956, p. 26).

The concept of superstition, although considered to be prevalent in sport, has been minimally studied. At one point in time, American athletes were thought to be inclined toward superstition. It was believed that they were concerned only with superior skill and strength (Richardson, 1925). This seems to be the case no longer. The literature suggests that in order to reinforce confidence, reduce tension, create the right frame of mind and even to insure victory, athletes have adopted superstitions which have been preserved and/or created by personal experience (Clark, 1930). The present study seeks to contribute to the knowledge and understanding of the little studied concept, superstition in sport.

Statement of the Problem

The purpose of this inquiry is to describe the superstitions of selected collegiate athletes. It seeks to answer the following questions:

1. To what extent are athletes superstitious?
 - (a) About which superstitions are they knowledgeable?
 - (b) Which superstitions do they practice?
 - (c) In which superstitions do they believe?

CHAPTER I
INTRODUCTION

The complete study of the psychology of sport addresses such topics as the personality, motivation and anxiety of athletes. Superstition is a psychological construct which, although considered to be prevalent in sport, has been minimally studied. At one point in time, American athletes were not thought to be inclined toward superstition. Rather, it was believed that they were concerned only with superior skill and strength (Richardson, 1925). This seems to be the case no longer. The literature suggests that in order to reinforce confidence, reduce tension, create the right frame of mind and even to insure victory, athletes have adopted superstitions which have been preserved and/or created by personal experience (Clark, 1930). The present study seeks to contribute to the knowledge and understanding of the little studied concept, superstition in sport.

Statement of the Problem

The purpose of this inquiry is to describe the superstitions of selected collegiate athletes. It seeks to answer the following questions:

1. To what extent are athletes superstitious?
 - (a) About which superstitions are they knowledgeable?
 - (b) Which superstitions do they practice?
 - (c) In which superstitions do they believe?

2. How do male and female athletes compare in their superstitious knowledges, practices and beliefs?
3. What are the stated origins of the superstitions believed in and/or practiced by athletes?
4. What purpose, if any, do athletes consider their sport superstitions serve?
5. How do black and white athletes compare in their superstitious knowledges, practices and beliefs?
6. Does a relationship exist between belief in superstition and need achievement?

Definition of Terms

For interpretation in this study, the following definitions are offered:

Belief in superstition--Refers to the acceptance of a superstitious notion.

Collegiate athletes--Members of university/college athletic teams which compete in an organized schedule of games. Specifically, institutions represented by the athletes were the University of North Carolina at Greensboro (UNC-G) and North Carolina Agricultural and Technical State University of Greensboro, North Carolina (NCA&T).

Knowledge about superstition--Implies having general information about or having heard of a superstitious notion.

Need Achievement--Refers to the athlete's need to achieve success and is measured by the Lynn Achievement Motivation Questionnaire.

Practice of superstition--Means that the athletes behave in such a way as to engage in conduct which acknowledges and sustains superstitious notions.

Superstition--"Belief in, or fear of, what is unknown, mysterious, or supernatural (Webster's Dictionary, 1966, p. 374)."

Assumptions

Several assumptions underlie this study. First, it is assumed that superstition is a measurable phenomenon. This inquiry further assumes that the origins of some superstitions may be identified by inference. Finally, it is acknowledged that the above depends upon the soundness of the data gathering instrument. Face validity of the questionnaire and honest responses to it by the subjects underlie the integrity of the study.

Scope of the Study

This research focuses on the superstitions of the men and women collegiate basketball and tennis teams of 1973-74 from the University of North Carolina--Greensboro and the men and women basketball teams and the men's tennis team from NCA&T State University of Greensboro, North Carolina. Use of a biased and comparatively small sample limits, somewhat, the choice of statistical techniques appropriate to the analysis of responses obtained.

Data about superstition is gathered by a specifically formulated questionnaire, a revised form of the instrument used by Gregory (1972).

By its very nature, this type of questionnaire, particularly the "closed response" portion limits the subject's alternatives for answering to suggestives provided by the investigator (Best,1970). Responses, then, are researcher-originated rather than subject-derived.

The gathering of the data at the conclusion of the season may also have some limiting effects on the results of the investigation. It is acknowledged that the availability of subjects for participation in the inquiry was lessened at the time data were gathered.

Significance of the Study

Superstition in sport is a concept of which relatively little is known. The subject is one about which athletes, coaches, and students of sport science speculate. Guthrie, as discussed in Oxendine (1968), in the development of his theory of contiguity, attempted to account for superstition in his stimulus-response explanation of learning. He indicated that such overt behavior is in fact necessary to elicit correct responses (p. 31). This premise, however, has been neither supported nor refuted. As a former athlete and coach, it is the writer's contention that superstition in sport is noticeably prevalent and may even be a particular "characteristic" of sportspersons. Yet, the causes and purposes of sport superstition remain unknown. This investigation is considered to be a small step toward adding to the understanding of the behavior of collegiate athletes. Further, the research has the potential to contribute to the growing body of knowledge about sport, a social institution, which touches the daily lives of many Americans.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter examines the related research and is intended to reveal the current status of knowledge about superstition--as a concept, as a topic of study and as it relates specifically to sport. The review is presented in four major categories: (a) definition of superstition; (b) origins of superstition; (c) some characteristics associated with the superstitious person; and (d) superstition in sport. It utilizes source materials from a variety of publications and is confined to literature dating from 1901 to 1974 although the writer acknowledges herewith that the history of superstition may be traced to the sixth century B.C. (Rawcliffe, 1959).

Definition of Superstition

Superstitious belief is unique to each person. What is superstition to one, may not be to another. The definition of superstition depends upon the general consensus of opinion of the culture (Ter Keurst, 1939a p. 673 and Lesser, 1931, p. 618). Therefore, many definitions are discernible in the literature which discusses this mysterious concept. Those who study superstition appear most widely to accept "belief in mystery and/or magic" as a basis for defining the concept (Levitt, 1952; Ter Keurst, 1939a; Maple, 1971; and Webster's Dictionary, 1966). Rawcliffe defines superstition as "credulity regarding the supernatural (1959, p. 511)." Ter Keurst (1939a) states that superstitious beliefs are primarily non-scientific, non-essential and

irrelevant. These include the superstitions associated with black cats and four-leaf clovers. However, he does concede that "belief nearer the focus of the system of beliefs (the scientific) (p. 675)" does constitute a second class of studies of superstition, misconcepts in natural science. Examples of this second class of superstition, as found in Ter Keurst's questionnaire, include the following: "conscience is a voice within you which accuses you when you have done wrong...the opinions of large city newspapers like the Chicago Tribune are usually correct...women are by nature purer and better than men (Ter Keurst, 1939a, pp. 678 & 680)."

Two studies (Lundeen & Maller, 1934 and Dresslar, 1907 in Lange, 1966), in an attempt to define superstition, offer various interpretations of the concept. In their investigation attempting to relate superstition and emotional maladjustment, Lundeen & Maller (1934) classified superstition into three categories:

1. [Beliefs] due to sheer lack of knowledge, to misinformation, and to faulty education;
2. [Beliefs] due to faulty reasoning and inability to perceive proper relationships, particularly relationships pertaining to cause and effect;
3. [Beliefs] due to emotional disturbances and anxiety, to unwillingness to face a distasteful reality, wishful thinking, and self-delusion (p. 592).

If one considers that fear of failure and desire for success and their attendant anxiousness are readily associated with the competitive experience, it follows that the third category by Lundeen & Maller, stated above, is most appropriate to a discussion of superstition in sport.

Dresslar (In Lange, 1966) offers five definitions of superstition.

1. ...a willingness and a phyletic, instinctive desire to believe in certain causal relations, which have not and cannot be proved to exist through revelation or through direct observation (p. 141).
2. ...naive belief in the all-pervasiveness of mind or spirit, and the possibility that man may know this universal mind through the suggestions made to him by the common things and events about him (p. 141).
3. ...a strong element of fear. ...based on a sort of unconscious belief that the whole machinery of the universe is in the hands of the Gods,...(p. 142).
4. ...represent in part those conclusions which men have adopted in order to free the mind from the strain of incompleting thinking (p. 143).
5. ...that form of emotional credulity prompted by an emotional predisposition which had its origin in adjustments to physical conditions long since passed away (p. 145).

In summary, then, explanations of the exact meaning of superstition involve the following: (a) fear and anxiety; (b) faulty education; (c) faulty reasoning; (d) belief in mystery and magic; (e) naïveté; and (f) desire for answers to otherwise unexplainable occurrences.

Origins of Superstition

In an effort to understand and explain phenomena around him, primitive man created the first superstitions (Eichler, 1924, p. 24; Brown in Lesser, 1931, p. 618; and Gregory & Petrie, 1972, p. 3). Many of nature's forces were not understood and were therefore seen as evil spirits, dragons and supernatural powers. Fear of novelty or

change prompted primitive communities to regard "the first occurrence or recurrence of any phenomena as evidence of the working of the supernatural, ...(Maple, 1971, p. 13)." It was out of these fears that vague superstitious notions and the first crude religions grew (Eichler, 1924). The close association of superstition and religion continued for many years. During the Protestant Reformation opposing religious dogmas and pagan beliefs of Roman Catholics were condemned as superstitions (Maple, 1971, p. 10). Superstitious belief in superior gods continued to exist primarily due to social interaction and communication (Swanson, 1960).

Many of the existing superstitions which relate to luck, health and premonition, for example, are remnants of ancient cultures, preserved through tradition and social interaction (Jahoda, 1969; Maple, 1971; and Gregory & Petrie, 1972). Often, traditional superstitions are emotionally accepted and practiced. While intellectually denying belief in superstitions, many people continue to practice these notions as a precaution against the uncontrollable (Dukelow, 1956 and Griffith, 1929). Maple (1971) attributes the creation and survival of superstition to stress, anxiety and loneliness. These conditions, he asserts, lead an individual to create the need for reinforcement and tension reduction.

While fear and emotion play a vital role in the existence of superstitions, faulty reasoning and ignorance also often result in the adoption of superstitious beliefs. Sullivan in postulating a social psychological framework for understanding personality, contributed a

unique explanation of the role of cognition; (a) prototaxic; (b) parataxic; and (c) syntactic. His second class, parataxic, is the stage where much of our thinking is found and where all superstitious thought takes place (Hall & Lindzey, 1957, p. 140). Within this stage a person sees "a causal relationship between events that occur at about the same time but which are not logically related (Hall & Lindzey, 1957, p. 140)." Lesser (1931), when discussing primitive man's creation of superstition, seems to concur with Sullivan's concept of parataxic thinking.

Primitive man is still in the earlier stage of human thinking, in which rationalism is crude and tentative, and superstition its halting product (p. 618).

Habit and reinforcement also contribute to the adoption of superstitious notions (Griffith, 1929). A result of operant conditioning, superstitious behavior is explained by Reynolds (1968) as the result of "the chance reinforcement of behavior, a true contingency (p. 32)." An event is contingent on behavior "if the event does in fact follow the behavior but need not do so (p. 31)." Herrnstein (In Honig, 1966) also investigating operant conditioning and superstition concludes the following.

Given certain features of the process of operant conditioning--that it takes place when response and reinforcer are in temporal contiguity, that the contiguity need only be approximate, and that conditioning is fast relative to extinction--we can predict, on purely deductive grounds, that responses may occasionally be conditioned by reinforcers that are actually occurring at random. This phenomenon, termed superstition, has been demonstrated empirically in animals. ...It was further pointed out that when particular

aspects of a response are explicitly reinforced, other, non-instrumental aspects are likely to be inadvertently reinforced as well. ...As long as these non-instrumental aspects of the behavior are in temporal contiguity with the reinforcer and are conditionable dimensions of behavior, they will become just as stereotyped as the essential aspects of the behavior (p. 50).

Thus, fear, emotion, faulty reasoning, ignorance, habit and reinforcement all seem to be instrumental in the origin and survival of superstitions. Any or all may cause a person to become superstitious.

Some Characteristics Associated
With the Superstitious Person

Superstitious people are seen as possessing a "relatively weak ego (Sanford, 1956, p. 276)," and fear due to ignorance (Eichler, 1924). Emme's works of 1940 and 1941 indicate that belief in superstition appears to decrease with age as well as with increased education. After providing 96 college students specific instruction on superstition, Emme (1941) measured each one's intelligence, emotion and superstition. Thirty-four of the students were then interviewed. The following results were found:

1. Belief in superstition seems to decrease with age as well as with increased educational attainment.
2. Women are more superstitious than men.
3. Specific instruction reduces belief in superstition.
4. Sources of superstitious beliefs vary, but the most prominent source is related to their transmission in primary relationships (family, friends, and close associates outside of the home setting).
5. Emotion is not correlated with these beliefs (1941, p. 183).

This would seem to indicate that superstitious people tend to be young and not well educated. However, further research reports that this description may not always be acceptable.

Harter (1937) studied the effects of psychological training upon belief in superstition and the importance of some of the factors involved in the acceptance of these beliefs. Ninety-four women and 154 men completed a questionnaire before and after a course in college elementary psychology. Results indicated that there "are very slight relationships existing between the degree of acceptance of these misconceptions and the factors of intelligence and scholarship (p. 124)."

Wagner (1928) investigated the nature and distribution of superstition among 186 college freshmen (129 men and 57 women). The investigation concluded the following:

1. Superstition is not correlated with intelligence.
2. Superstition does not depend for its source upon either rural or city community life.
3. Superstition is not a product of any or several religious beliefs or immigrant groups.
4. Superstition is not particularly harbored by youth, although youth is slightly more susceptible to it.
5. Both sexes are superstitious, women being somewhat more so than men (p. 34).

Wagner also concluded that "superstition feeds upon and grows to its most luxuriant proportions among the habitually suggestible (p. 35)."

Furthermore, "it would seem that superstition is the result of a suggestible individual's being exposed to an environment containing much dogma of a superstitious character (p. 35)."

In 1939, Ter Keurst completed 2 studies involving superstitious individuals. Six hundred and sixty-three subjects completed a questionnaire, Check List of Beliefs, in the first study (1939a). It was found that children in secondary school continued to accept a large number of superstitions. Also, no decrease in belief in superstition was found with increased age or education or between sex groups. However, "significant quantitative differences and a few qualitative differences were found in the incidence of superstitious beliefs between the white and colored [black] children (p. 685)." Ter Keurst's second (1939b) investigation sought to ascertain the differences between superstitious and non-superstitious children. One hundred subjects were selected from the 663 of the previous study. The Check List of Beliefs was again administered. "Significant differences were found between superstitious and non-superstitious children with respect to intelligence and school progress (p. 267)." Also, it was concluded that "superstitiousness is characteristic of that vicious circle which includes an unfavorable socio-economic status, inadequate mental development, lack of social adjustment, and insufficient personality adjustment. ... The non-superstitious were found to have less neurotic tendencies, were more self-sufficient, less introverted, and less submissive than the superstitious group (p. 267)."

Dresslar (In Lange, 1966) studied 875 subjects and arrived at three conclusions:

1. The compelling force of emotional bias is a large element in bringing about the acceptance of conclusions, especially those recommended by tradition (pp. 149-150).

2. It is an hygenic necessity for the mind to come to rest in conclusions (p. 150).
3. Belief in superstition is not often engendered by intellectual processes, but for the most part in spite of them (p. 150).

His results seem to concur with previous findings concerning emotional stability and intelligence.

Haber (1966) cites Freud's view of the superstitious person as follows:

He knows nothing of the motive of his chance and faulty actions; he believes in the existence of psychic contingencies; he is therefore inclined to attribute meaning to external chance, which manifests itself in actual occurrence, and to see in the accident a means of expression for something hidden outside of him (p. 660).

Jahoda (1971) also discusses psychoanalytic theory in his interpretation of superstition. In his explanation about Freud's and Jung's notions on the subject, Jahoda states:

...superstitious beliefs and practices are deeply rooted in man's unconscious mental processes; both held that superstition is not a thing of the past, or confined to the less educated--in fact it is regarded as part and parcel of everybody's mental make-up, liable to come to the surface under certain circumstances. ... Above all, they stress the emotional element in superstition, which helps us to understand why confronting the superstitious person with contradictory information often makes so little difference (p. 69).

Reported studies dealing with sex differences as related to superstition have found that females are more superstitious than males (Wagner, 1928; Caldwell & Lundeen, 1930; Gilliland, 1930; Dudycha, 1933; Valentine, 1936; Emme, 1940; and Zapf, 1945). In an inquiry

conducted by Conklin (1919), a questionnaire was completed by 267 males and 290 females, of which 90% of the females were superstitious while only 73% of the males displayed superstitiousness. Signifying bad luck, the men mentioned:

Picture taking before ball game..., chew gum while playing ball, funeral passing in front of player before football game, entering track meet in clean pants, missing baskets while warming up for basketball game...(p. 91).

Lucky signs were:

Seventh inning..., crossed bats, spit on hand and slap with finger direction of splash indicating direction of lost ball,...(p. 93).

None of the women in Conklin's study listed anything generally associated with the sport experience, per se, as a type of superstition. Conklin concluded that:

The superstitions of women are much more concerned with the home, company, social relations, wishes, love, marriage and death; while those of the men are concerned chiefly with sports and success in the business activities of life. The superstitions of the women concern far more the feelings, emotions and desires; they are more subjective than the men, more deeply personal (p. 96).

The results of Conklin's study seem at this time to be somewhat outdated. His conclusions are based on a period when female participation in sport was rare. The more recent research of Gregory & Petrie (1972), while reaffirming Conklin's results which indicated that females are more superstitious than males, identified superstitions related to sport among both females as well as males.

Although contradictions are found within the literature dealing with the description of the superstitious person, certain characteristics seem generally accepted:

1. Superstition is not correlated with intelligence.
2. Superstition is not correlated with educational attainment.
3. There is no significant correlation between superstitiousness and age, although youth seem particularly vulnerable.
4. The highly suggestible and gullible are particularly vulnerable to superstitiousness.
5. Females are more superstitious than males.
6. Blacks are more superstitious than whites.

In summary, then, it seems that everyone is susceptible to superstitiousness. Athletes are no exception.

Superstition in Sport

Causes of Sport Superstitions

Lefty O'Doul, a famous National League Baseball manager, once said that "superstition is good for a ballplayer. It has psychological effects. It keeps a player's mind revolving around baseball (In Vass, 1973, p. 69)." The prevalence of superstitious behavior in sport is apparent. There seem to be various reasons why athlete's are superstitious, as well as what purpose their superstitions serve. Beisser (1967) sees the importance of victory and an athlete's obsessive-compulsive behavior created by anxiety over his inability to win as the explanation of superstition in sport. He says that "whenever there are seemingly

mysterious forces at play a tendency exists to attach magical significance to them. The athlete whose competitive ability is blocked by such unconscious forces looks to magic for explanation and solution (p. 165)." His discussion of this magical force continues:

An athlete in a competitive sport must face his goal of winning. To accomplish this he must somehow master or overcome certain unconscious concomitants of winning. ...forces opposing victory take place outside the player's awareness, they seem magical. Even though the player logically denies the existence of magic, he finds himself bound by superstition and employing elaborate rituals to defend himself against dire consequences. ... The magic and rituals...illustrate the problems that the athlete faces in trying to win and why it is often said that a player is 'his own worst enemy' (1967, p. 169).

Lawther (1972) concurs with Beisser's anxiety-driven cause of superstition in sport. "The anxiety and worry of the emotionally aroused athlete is the underlying cause of the origin of many superstitions (1972, p. 81)." Lawther's explanation of superstition in sport is further elaborated.

Superstitions are attempts to reassure oneself by a type of necromancy or false magic embodied in some symbol; they are anxiety-escape mechanisms. They are common aspects of the feeling and behavior of most people who are engaged in highly emotional types of work or activity, regardless of their intelligence (1972, p. 81).

The need for a right frame of mind is essential in sport (Clark, 1930 and Schuessler, 1956). Clark's (1930) explanation of athletes' superstitiousness emphasizes this point. A right frame of mind helps an athlete develop confidence. Clark stresses the importance of confidence to an athlete's performance.

Ball players get no breaks without confidence in themselves, and lucky omens inspire this confidence while unlucky signs take it away (p. 60).

Helpful in the development of confidence is success. Success can breed superstitious behavior. A victorious athlete frequently tries to repeat everything he did in order to insure victory again (Masin, 1942 and Maple, 1971). Often repeated behaviors become traditional or ritualistic. Richardson (1925) attributes many sport superstitions to the tradition of the sport.

Griffith (1929), the "premier" sport psychologist, devoted an entire chapter of his historic book to the psychology of sport superstition. The "jinx in athletics" is described by Griffith as follows:

A jinx, as we now see, is a belief that special failures in playing a game are due to some object or event that has been present at the time of a preceding failure. It is necessary only that the object or event which we assume to be the cause of our failure is sufficiently striking and unusual to attract attention and that the failure be so great and so unexpected as also to attract our attention. We leap to the conclusion that there is some mysterious relation between our failure and the strange object or event which happened at the same time or just previous to the failure. We need not always consciously believe that there is some causal relationship between the two or that this causal relationship is due to magical power or to evil intent; it is only necessary that we half consciously fall into the belief or conviction that we are for the time being under the influence of a strange power or force. We may have fallen into a series of "unlucky" days (1929, p. 100).

Loss of confidence and fatigue are cited as two conditions which may result in the adoption of superstitions.

Coincidences may appear more real when we are tired than when we are fully rested. Furthermore a little fatigue will result in just that sort of incoordination and lack of steadiness which leads to a series of unlucky accidents (1929, p. 104).

To escape from fear and anxiety, to develop the right frame of mind and confidence, to insure success and to preserve traditions, many superstitions related to sport are created and adopted. Specific illustrations of these interesting beliefs and behaviors are described in the concluding segment of this review of related literature.

Examples of Sport Superstitions

Examples of superstition in sport are many and varied. Beisser (1967) calls attention to them as follows:

Baseball players use lucky pieces, lucky clothes, lucky equipment, refuse to shave while winning, sit in special places in the dugout, and don't mention that a pitcher has a no hitter going. Some athletes seek Divine protection--a basketball player can be seen to make the sign of the cross before shooting a foul shot, or a boxer may kneel to pray in the ring before the bell. Basketball teams, before going into action, lay their hands together to symbolize their solidarity. They try to fight the unknown forces that lie within them with magical gestures (p. 165).

Maple (1971) describes the superstitions of soccer and rugby players.

In more competitive sports like soccer, ..., ritualism has become paramount. A living mascot such as a young child is even used by some teams. On entering the field players will religiously pass the ball from the oldest to the youngest player for luck, and the ball is frequently bounced three times before the team takes up its position. It is also the custom to touch the goal posts for luck. Individual players observe many fetishes which must be religiously honoured

if the day is to be won. In both soccer and rugby the left boot is usually put on before the right and the laces are generally tied in a special way (p. 51).

Some individuals have identified degrees of superstition among athletes. Baseball players, for instance, are often considered the most superstitious of all athletes (Clark, 1930; Masin, 1942; and Beisser, 1967).

The baseball player tenaciously insists on using a special glove and sometimes even a particular bat, or cap. There is more than a touch of superstition that accompanies some of the more insistent identifications... (Weiss, 1969, p. 75).

A sure sign of base hits is to pass a load of empty barrels on the way to the ball park (Clark, 1930). A story is told of a baseball team, the Giants, which was experiencing a batting slump. One day Mike Donlin, a star of the Giants, saw a wagon of empty barrels outside of the ball park and then proceeded to collect three hits. The following day, however, he went hitless. Realizing the superstitiousness of his star, John McGraw, the manager, hired a wagon to circle the stadium everyday. Donlin went on a hitting streak which lasted for quite some time and the Giants won the pennant (Schuessler, 1956, and Vass, 1973).

Red Ames, another Giant player, was considered to be an "unlucky" pitcher. One day he received through the mail a necktie and a four-leaf clover with the following instructions:

The four-leaf clover had to be worn on both uniform and street clothes, and the necktie, a very vivid one, worn with street clothes and hidden in the uniform (Clark, 1930, p. 61).

Ames followed the instructions and started to win. He wore the necktie until it was worn out (Clark, 1930).

Masin (1942) also describes a few interesting baseball superstitions.

The Cincinnati Reds feel they won the pennant in 1940 because of an old dirty tie owned by Manager, Bill McKechnie. He wore the magic tie day in and day out, and sometimes even slept in it. It was this, the players swear, that pulled them through the tight spots. ...On the day after a batting splurge, Al Lopez, Pittsburgh Pirate catcher, eats exactly the same food as he did the day before. ...Bats are loaded with whammies. A bat is supposed to contain just so many singles, doubles, triples, and homers. That's why a player will rarely lend his bat, even to a buddy. They're afraid the borrower may take a hit out of the bat that they (the lenders) may need themselves (p. 37).

In 1956, Schuessler reported that most baseball players were superstitious. He listed the behavior of many famous players of the time. One individual identified was a very expressive man, Leo Durocher.

Leo Durocher in the third base coaching box always kicks third base at the first of every inning, picks up the third baseman's glove and pounds it, and goes through a fascinating ritual of drawing weird patterns in the chalk lines of the coaching box (p. 92).

Even the wives of the ballplayers yield to the fear of altering a pattern of good luck. In the World Series of 1970, wives associated with the team winning usually wore "the same dress, hat, earrings and rings as long as the charm lasts. Twice the [Baltimore] Orioles scored while one of the wives was away from her seat. After that a contingent of Oriole spouses absented themselves everytime Baltimore was at bat (Time, 1970, p. 15)."

Ballplayers are not the only superstitious athletes. Kenyon soccer players will not play a game without the advice of their witch doctor (New York Times, 1971). Great care is taken to avoid evil charms as well as to "jinx" opponents.

Before important matches sentries patrol the stadium to see that no one places a charm upon the ball.

Clubs usually refuse to announce the names of their players in advance for fear that they might be bewitched. Moreover, the players often avoid official dressing rooms and gates for fear of evil charms left there by unsportsmanlike rivals of their supporters (New York Times, February 22, 1971, p. 35).

A soccer match in Zambia resulted in the fans rushing the Zaire goalie because "he had strung charms in the goal, supposedly giving him an unfair advantage over the home team (New York Times, November 5, 1973, p. 56)."

Also in soccer, East Stroudsburg State College's soccer team while rated 18th in the nation lost their first game of the season. Two weeks later, the Warriors were again rated number 18. Suffering their first loss while being 18th caused Coach John McKeon to "hope the number 18 isn't a jinx..." (The Pocono Record, October 17, 1973, p. 15)."

Ice hockey players are also superstitious. The November 19, 1973 issue of Sports Illustrated contributed to the fascinating accounts of superstition in sport. In an article about Phil Esposito of the Boston Bruins, Mulvoy relates the strange ritual performed by Esposito prior to the start of a game.

The room is strangely quiet as Esposito stands up and winks at the red horn suspended from the shelf above his seat. When Esposito's grandmother gave him the horn, she assured

him it would always ward off the 'malaccio', the evil eye. Now the superstitious Esposito would rather play on roller skates than miss his pre-game wink. Sitting down, Esposito pulls on a tattered black T-shirt, making sure it is inside out and backwards, and pins a St. Christopher medal to his suspenders. Then he deliberately sets his hockey stick onto the carpeted floor squarely between his outstretched legs, with the taped blade pointing in a north-west direction, and places his black and white gloves palms up alongside the butt end of the stick. At this precise instant Frosty Forristall, the team's assistant trainer, appears with a container of baby powder and splatters it on the blade of Esposito's stick. As Forristall walks away, Esposito looks sharply around for some unlucky omen, like a turned-over paper cup or, shriek, crossed hockey sticks (p. 32).

Maple's (1971) description of superstitious behavior in tennis reveals that these beliefs are not merely confined to team-type sports. From the annals of what was considered to be the "elite" of sports, one notes:

In 1968, a Wimbledon player would never use a ball that had been returned to him after he had been faulted but always insisted upon a fresh one---...a ball that had not been contaminated by bad luck (p. 53).

These are just a few of the superstitions known to exist in the realm of sport. Many different rituals are performed by different individuals. Or, to reiterate the writer's view expressed above, superstitious belief is an individual matter.

CHAPTER III

PROCEDURES

The first step undertaken in carrying out the research was to review the literature. Consideration of the status of knowledge about superstition in general and sport superstition in particular was essential to the specification of the problem as presented in Chapter I. Thereafter, the following strategies were executed relative to data gathering and analysis.

Instrumentation

Superstition as related to sport has been a topic of very limited investigation. Therefore, few means of measuring this phenomenon exist. However, Gregory's (1972) work provides a point of departure for formulating the questionnaire form used in this study. The revised form of the Gregory (1972) paper and pencil instrument is utilized to accommodate the framing questions of this study. Rationale for the selection of this method of data gathering is administrative feasibility and the relative adaptiveness of the responses to coding and analysis. The questionnaire also allows for: (a) specific responses to questions posed by the investigator as well as alternative answers originating with the subjects; (b) administration without the presence of the investigator; and (c) completion of the instrument in a short amount of time at the convenience of the subject.

Items solicited by Gregory (1972) judged to be irrelevant to this inquiry are deleted as a first step in construction of the response

form. Additional questions aimed toward answering the specific questions of the study are devised and added to the form. Twenty-two forced-choice and open-ended questions are included in the instrument. The questionnaire consists of 4 parts: (a) background information; (b) the Lynn Achievement Motivation Questionnaire; (c) general superstitions; and (d) superstitions related to sport. The Achievement Motivation Questionnaire is included to determine any possible correlations between superstitiousness and need achievement score (nAch). See Appendix A for a sample of the exact form used.

Following revision of the Gregory (1972) instrument, a pilot study was conducted utilizing 6 athletes, 3 men and 3 women, as subjects. The study reinforced the appropriateness of the instrument toward answering the framing questions of the research. No modifications of the form were required.

Selection of Subjects

The subjects for the study are volunteers from the 1973-74 collegiate men's and women's basketball and tennis teams of the University of North Carolina--Greensboro (UNC-G) and the men's and women's basketball and the men's tennis team of North Carolina Agricultural and Technical State University (NCA&T) of Greensboro, North Carolina. Athletes at these institutions were selected because it is possible for the writer to personally contact the coaches and in some cases the athletes themselves. Inquiry into the availability of a black female tennis team yielded no result. Telephone calls made to a school in Maryland known to have had a black female tennis team revealed that the team no

longer existed at that institution. Therefore, there are no data for black female tennis players included in the study. In all, the data for this research are provided by 55 subjects: 18 black males, 7 black females, 13 white males and 17 white females.

Data Gathering

Permission was requested of the coaches of the men's and women's basketball and tennis team of UNC-G to use their team members as subjects. The coaches and the writer agreed that participation would be voluntary.

Members of both tennis teams were easily contacted inasmuch as tennis was in season when data were collected. Following solicitation of their involvement and agreement, coaches were given the questionnaire to administer to their respective teams at both NCA&T and UNC-G.

The UNC-G male basketball team members were involved in the study as a result of the cooperation of the assistant basketball coach. Forms were distributed to the entire squad by the assistant coach and team captain. The UNC-G women basketball players were contacted through various means including use of campus mailboxes, the assistance of instructors and by means of friends.

Obtaining responses from the NCA&T segment of the sample proved to be a difficult task. Following a meeting with the Director of Physical Education at NCA&T, the coaches of the men's basketball and tennis teams accepted the questionnaire and relayed them to their respective team members. However, only those athletes attending summer school completed the questionnaire. An attempt to recover outstanding forms from remaining members of the teams was unsuccessful.

Returns from UNC-G included 11 from the women's basketball team, 9 from the men's basketball team, 8 from the women's tennis team and 5 from the men's tennis team. Two athletes, 1 male and 1 female, indicated that they are members of both the basketball and tennis teams. From NCA&T, 11 responses from the men's basketball team, 6 from the men's tennis team and 5 from the women's basketball team were returned.

Treatment of the Data

Data are summarized and tabulated for each sex and race and for the total sample combined. Responses are organized in 4 general categories: (a) the superstitions reported; (b) the origins of the superstitions reported; (c) the purposes of the superstitions reported; and (d) the achievement motivation of the subjects.

The first step of analysis is to tabulate the frequencies of responses to all questions. The number of responses for each sex and race are categorized and totaled for general background information, general and sport superstitions, origins of general and sport superstitions, and purposes of sport superstitions. The results are tabled.

A Sport Superstition Index is calculated based on the writer's contention that belief in superstitious notions is indicative of a high level of superstitiousness. The Sport Superstition Index obtained for each group derives from the frequencies for each level of superstition multiplied by a constant value and divided by the number of subjects. A value of 1 is used for superstitions acknowledged to be heard about; 2 for those practiced; and 3 for those believed in.

The need achievement score of each subject is determined by responses to the Lynn Achievement Motivation Questionnaire (Lynn, 1969, p. 529). Questions having a nAch connotation answered positively are assigned 1 point. Those answered negatively are assigned zero points. Questions not having a nAch connotation answered positively are assigned zero points. Those answered negatively are assigned 1 point. To ascertain the relationship between nAch and general superstition, a nonparametric correlation coefficient, Kendall, is calculated using the SPSS computer program. Because nAch is a general personality factor not necessarily specific to sport achievement, the Lynn score is correlated with general superstitions rather than the sport-related superstitions.

The final steps taken in carrying out the study involve interpreting the data and preparing a final report of the research.

CHAPTER IV

ANALYSIS OF DATA

This chapter answers the framing questions of the study as set forth in Chapter I. Due to the relatively small sample and uneven number of subjects in each group only frequencies are used in describing the findings. Data are tabled in this chapter within general categories.

Summary of Responses

Background Information

Table 1 presents background information. Age, team affiliation, class, religion and religious intensity are listed. Frequencies of each are reported for males and females and are also shown for black and white subjects. Although crude, the data show a general similarity of frequencies between males and females for several of the characteristics included in the table. For example, 24 of the 31 males and 16 of the 24 females are 19, 20, or 21 years of age. When considered racially, these ages again appear to be prevalent except for the black female athletes whose age is rather evenly distributed from age 18 to 22.

Nineteen male and 17 female subjects are members of their school's basketball team. Only 2 subjects indicate that they are members of both the basketball and the tennis teams, 1 white male and 1 white female.

TABLE 1
General Background Information
Frequencies of Responses

	Race				Males n=31	Females n=24
	Blacks (25)		Whites (30)			
Age	Males	Females	Males	Females		
18	3	1	0	4	3	5
19	4	2	3	2	7	4
20	6	1	2	7	8	8
21	3	1	6	3	9	4
22	2	2	0	1	2	3
23	0	0	1	0	1	0
26	0	0	1	0	1	0
Team Affiliation						
Basketball	12	7	7	10	19	17
Tennis	6	0	5	7	11	7
Both	0	0	1	1	1	1
Other	1	2	2	7	3	9
Class						
Freshman	7	3	1	5	8	8
Sophomore	5	0	3	5	8	5
Junior	4	2	4	5	8	7
Senior	2	2	5	2	7	4

TABLE 1 (cont.)

Religion	Race				Males n=31	Females n=24
	Blacks (25)		Whites (30)			
	Males	Females	Males	Females		
Catholic	1	1	3	2	4	3
Jewish	0	0	0	1	0	1
Baptist	10	2	2	5	12	7
Episcopalian	0	1	0	1	0	2
Lutheran	1	0	0	1	1	1
Methodist	4	0	4	3	8	3
Presbyterian	0	0	0	1	0	1
None	0	0	0	1	0	1
Do Not Wish To Answer	0	0	1	0	1	0
No Answer Given	0	0	0	0	0	0
Other	2	3	3	2	5	5
Religious Intensity						
Deeply	1	2	2	2	3	4
Moderately	2	3	5	14	7	17
Indifferent To	1	0	4	1	5	1
Opposed To	0	0	0	0	0	0
Do Not Wish To Answer	4	2	2	0	6	2
No Answer Given	1	0	0	0	1	0

Answers to the questions concerning religion indicate that a good number of the athletes are Baptist or Methodist. Moderate religious intensity is the modal frequency.

General Superstitions

Tables 2, 3 and 4 present the frequencies of the general superstitions as they are reported by subjects to be heard of, practiced and believed. The 24 superstitions indicated in alphabetical order are suggested in the questionnaire. Responses are presented for the total athletic population and also for the separate sub-samples.

Table 2 reveals that the subjects are most knowledgeable about superstitions related to black cats, rabbit's foot, four-leaf clovers, broken mirrors and crossing yourself. Females amass a higher frequency than males for charms, clothing items and crossing yourself. Higher frequencies for females are also reported for crossed bats and sticks and horseshoes over doors.

Twenty-three of the 25 black athletes indicate that they have heard of the superstition concerning opening an umbrella indoors. This is the highest frequency for black athletes. The entire population of white athletes indicate knowledge of 3 of the items listed; black cats, crossing fingers and rabbit's foot. Twenty-nine identified having heard about four-leaf clovers, lucky and unlucky numbers and wishbones.

The superstitions most highly practiced by the subjects are crossing fingers (25:55), wishing luck (25:55) and wishbones (24:55). See Table 3. Ten of the 31 males practice the superstition associated

TABLE 2
 General Superstitions
 Frequencies Reported to be Heard Of

Item	All Ss* n=55	All M* n=31	All F* n=24	All Bl* n=25	All Wh* n=30	All Bl-M* n=18	All Wh-M* n=13	All Bl-F* n=7	All Wh-F* n=17
Black Cats	52	29	23	22	30	16	13	6	17
Broken Mirrors	50	27	23	22	28	15	12	7	16
Bugs/Insects	19	10	9	11	8	7	3	4	5
Charms	45	22	23	17	28	11	11	6	17
Clothing Items	37	17	20	14	23	9	8	5	15
Colors	35	16	19	14	21	9	7	5	14
Crossed Bats, Sticks, etc.	30	14	16	11	19	7	7	4	12
Crossing Fingers	50	27	23	20	30	14	13	6	17
Crossing Yourself	35	17	18	12	23	7	10	5	13
Four Leaf Clover	51	29	22	22	29	16	13	6	16
Funerals	30	16	14	15	15	9	7	6	8
Horseshoe Over Door	39	19	20	16	23	11	8	5	15
Howling Dogs	24	13	11	13	11	9	4	4	7
Lucky Coins	44	24	20	17	27	12	12	5	15
Lucky/Unlucky Numbers	47	25	22	18	29	12	13	6	16
Opening Umbrella	49	26	23	23	26	16	10	7	16
Playing Cards	28	16	12	12	16	9	7	3	9
Rabbit's Foot	52	29	23	22	30	16	13	6	17
Sidewalk Cracks	42	20	22	15	27	9	11	6	16

TABLE 2 (cont.)

Item	A11 Ss n=55	A11 M n=31	A11 F n=24	A11 Bl n=25	A11 Wh n=30	A11 Bl-M n=18	A11 Wh-M n=13	A11 Bl-F n=7	A11 Wh-F n=17
Sunrise-Sunset	19	10	9	11	8	8	2	3	6
Touching Wood	38	20	18	14	24	8	12	6	12
Walking Under Ladders	45	25	20	18	27	13	12	5	15
Wishbones	49	27	22	20	29	14	13	6	16
Wishing Luck	43	23	20	17	26	11	12	6	14

* Ss--Subjects; M--Males; F--Females; Bl--Blacks; Wh--Whites;
Bl-M--Black Males; Wh-M--White Males; Bl-F--Black Females;
Wh-F--White Females

TABLE 3
 General Superstitions
 Frequencies Reported to be Practiced

Item	All Ss* n=55	All M* n=31	All F* n=24	All Bl* n=25	All Wh* n=30	All Bl-M* n=18	All Wh-M* n=13	All Bl-F* n=7	All Wh-F* n=17
Black Cats	9	4	5	5	4	3	1	2	3
Broken Mirrors	4	3	1	4	0	3	0	1	0
Bugs/Insects	1	0	1	1	0	0	0	1	0
Charms	10	3	7	2	8	1	2	1	6
Clothing Items	16	5	11	3	13	1	4	2	9
Colors	6	1	5	0	6	0	1	0	5
Crossed Bats, Sticks, etc.	3	1	2	0	3	0	1	0	2
Crossing Fingers	25	10	15	10	15	5	5	5	10
Crossing Yourself	4	1	3	1	3	0	1	1	2
Four Leaf Clover	18	7	11	7	11	4	3	3	8
Funerals	2	1	1	2	0	1	0	1	0
Horseshoe Over Door	1	0	1	0	1	0	0	0	1
Howling Dogs	1	0	1	1	0	0	0	1	0
Lucky Coins	11	5	6	4	7	3	2	1	5
Lucky/Unlucky Numbers	15	4	11	3	12	3	1	0	11
Opening Umbrella	5	3	2	4	1	3	0	1	1
Playing Cards	3	3	0	2	1	2	1	0	0
Rabbit's Foot	4	2	2	2	2	2	0	0	2
Sidewalk Cracks	8	2	6	2	6	1	1	1	5

TABLE 3 (cont.)

Item	A11 Ss n=55	A11 M n=31	A11 F n=24	A11 Bl n=25	A11 Wh n=30	A11 Bl-M n=18	A11 Wh-M n=13	A11 Bl-F n=7	A11 Wh-F n=17
Sunrise-Sunset	0	0	0	0	0	0	0	0	0
Touching Wood	13	5	8	3	10	1	4	2	6
Walking Under Ladders	10	5	5	4	6	2	3	2	3
Wishbones	24	10	14	5	19	3	7	2	12
Wishing Luck	25	9	16	6	19	3	6	3	13

* Ss--Subjects; M--Males; F--Females; Bl--Blacks; Wh--Whites;
Bl-M--Black Males; Wh-M--White Males; Bl-F--Black Females;
Wh-F--White Females

with crossing fingers and wishbones; 16 of the 24 females practice the superstitions related to wishing luck, 15 practice crossing fingers and 14 practice wishbones.

Black athletes practice crossing fingers most often (10:25) while 19 of the 30 white athletes acknowledge practicing both wishbones and wishing luck.

Wishing luck (9:55), crossing fingers (7:55) and clothing items (6:55) are the superstitions most highly believed by the subjects. This is presented in Table 4. Five of the 9 athletes believing in superstition associated with wishing luck are males; this item has the highest male frequency. Five females also reported belief in clothing items.

Black athletes' highest frequency is 5 of the total number of 25 black subjects who participated in the study. This is reported for crossing fingers and for wishing luck. Four of 30 white athletes believe in wishing luck. This is the highest obtained frequency.

Sport Superstitions

The sport superstitions presented in Tables 5, 6 and 7 are those posed by the subjects in the open response portion of the questionnaire. Again, the 3 tables are concerned with 3 levels of superstitions: those that are heard of, practiced and believed.

Table 5 identifies the sport superstitions about which the subjects are knowledgeable. The highest number of responses per item is 16 from the 55 subjects. This item is concerned with the procedures and positions for taking a free throw in basketball. The item with the second highest frequency is also associated with the free throw in

TABLE 4 (cont.)

Item	All Ss n=55	All M n=31	All F n=24	All Bl n=25	All Wh n=30	All Bl-M n=18	All Wh-M n=13	All Bl-F n=7	All Wh-F n=17
Sunrise-Sunset	0	0	0	0	0	0	0	0	0
Touching Wood	1	0	1	1	0	0	0	1	0
Walking Under Ladders	3	2	1	3	0	2	0	1	0
Wishbones	3	2	1	3	0	2	0	1	0
Wishing Luck	9	5	4	5	4	3	2	2	2

* Ss--Subjects; M--Males; F--Females; Bl--Blacks; Wh--Whites
Bl-M--Black Males; Wh-M--White Males; Bl-F--Black Females;
Wh-F--White Females

TABLE 5
Sport Superstitions
Frequencies Reported to be Heard Of

Item	All Ss* n=55	All M* n=31	All F* n=24	All B1* n=25	All Wh* n=30	All B1-M* n=18	All Wh-M* n=13	All B1-F* n=7	All Wh-F* n=17
Procedure and Position for Free Throw	16	5	11	3	13	1	4	2	9
Bouncing Basket- ball Before Free Throw	14	7	7	2	12	2	5	0	7
Clothing Items	12	5	7	3	9	3	2	0	7
Crossing Yourself	7	2	5	0	7	0	2	0	5
Numbers	6	3	3	2	4	2	1	0	3
Equipment	5	5	0	4	1	4	1	0	0
Maintaining Con- stancy Follow- ing Victory	5	5	0	1	4	1	4	0	0
Making First Shot in Basketball	4	3	1	1	3	1	2	0	1
Warm-up	4	2	2	1	3	1	1	0	2
Bouncing Ball Before Serving	3	0	3	0	3	0	0	0	3
Bouncing Ball Spe- cific # of Times Before Serve	3	0	3	0	3	0	0	0	3
Charms	3	2	1	0	3	0	2	0	1
Food, Gum, Candy	3	0	3	0	3	0	0	0	3

TABLE 5 (cont.)

Item	All Ss n=55	All M n=31	All F n=24	All Bl n=25	All Wh n=30	All Bl-M n=18	All Wh-M n=13	All Bl-F n=7	All Wh-F n=17
Order of Dressing	3	0	3	0	3	0	0	0	3
Tennis Ball-Rubbing, Looking at & Blowing on	3	0	3	0	3	0	0	0	3
Colors	2	1	1	1	1	1	0	0	1
Jewelry	2	0	2	0	2	0	0	0	2
Practice Stroke in Golf	2	0	2	0	2	0	0	0	2
Praying	2	1	1	1	1	1	0	0	1
Shoe Lace	2	0	2	0	2	0	0	0	2
Always Putt Out in Golf	1	0	1	0	1	0	0	0	1
Cheers-Chants	1	0	1	0	1	0	0	0	1
Coins	1	0	1	0	1	0	0	0	1
Crossing Fingers	1	0	1	0	1	0	0	0	1
Handshake	1	1	0	0	1	0	1	0	0
Last One Out of Dressing Room	1	1	0	0	1	0	1	0	0
Music	1	0	1	0	1	0	0	0	1
Never do Same Thing Twice Before a Game	1	1	0	0	1	0	1	0	0

TABLE 5 (cont.)

Item	A11 Ss n=55	A11 M n=31	A11 F n=24	A11 Bl n=25	A11 Wh n=30	A11 Bl-M n=18	A11 Wh-M n=13	A11 Bl-F n=7	A11 Wh-F n=17
Specific Motions for Serving	1	0	1	0	1	0	0	0	1
Temperature (Weather)	1	1	0	0	1	0	1	0	0
Wipe Hands on Pants	1	0	1	0	1	0	0	0	1

* Ss--Subjects; M--Males; F--Females; Bl--Blacks; Wh--Whites;
Bl-M--Black Males; Wh-M--Black Males; Bl-F--Black Females;
Wh-F--White Females

basketball. Fourteen superstitions associated with bouncing a basketball before a free throw are indicated. The third most frequent response is related to clothing items (12:55).

Male subjects list most often superstitions associated with bouncing a basketball before a free throw (7:31). Almost one half (11:24) of the superstitions listed by females are related to procedures and positions for taking a free throw in basketball.

The comparatively few sport superstitions checked by black athletes are headed by superstitions related to equipment (4:25). The 30 white athletes, however, list, among others, 13 associated with procedures and positions for taking a free throw in basketball and 12 associated with bouncing a basketball before a free throw.

Table 6 shows the number of sport superstitions purportedly practiced by the subjects. Frequencies for this level of superstition are lower than the heard of category. Superstitions related to bouncing a basketball before a free throw obtained the highest frequency. Eight times this item is checked by the athletes indicating the practice of the behavior. The next 2 most frequent superstitions are concerned with the procedures and positions for a free throw in basketball and clothing items. Both of these behaviors are recorded 7 times by the athletes. Six of the superstitions are not practiced by either race.

Bouncing a basketball before a free throw is the male subjects' most frequent response (5:31). Females' highest frequency involves procedures and positions for taking a free throw in basketball and clothing items. Both of these superstitions elicit a frequency of 4:24.

TABLE 6
Sport Superstitions
Frequencies Reported to be Practiced

Item	All Ss* n=55	All M* n=31	All F* n=24	All B1* n=25	All Wh* n=30	All B1-M* n=18	All Wh-M* n=13	All B1-F* n=7	All Wh-F* n=17
Procedure and Position for Free Throw	7	3	4	2	5	1	2	1	3
Bouncing Basket- ball Before Free Throw	8	5	3	2	6	2	3	0	3
Clothing Items	7	3	4	2	5	2	1	0	4
Crossing Yourself	2	0	2	0	2	0	0	0	2
Numbers	6	3	3	2	4	2	1	0	3
Equipment	4	4	0	4	0	4	0	0	0
Maintaining Con- stancy Follow- ing Victory	0	0	0	0	0	0	0	0	0
Making First Shot in Basketball	2	1	1	1	1	1	0	0	1
Warm-up	2	1	1	1	1	1	0	0	1
Bouncing Ball Before Serving	1	0	1	0	1	0	0	0	1
Bouncing Ball Spe- cific # of Times Before Serve	1	0	1	0	1	0	0	0	1
Charms	1	1	0	0	1	0	1	0	0
Food, Gum, Candy	1	0	1	0	1	0	0	0	1

TABLE 6 (cont.)

Item	All Ss n=55	All M n=31	All F n=24	All Bl n=25	All Wh n=30	All Bl-M n=18	All Wh-M n=13	All Bl-F n=7	All Wh-F n=17
Order pf Dressing	0	0	0	0	0	0	0	0	0
Tennis Ball-Rubb- ing, Looking at & Blowing on	0	0	0	0	0	0	0	0	0
Colors	2	1	1	1	1	1	0	0	1
Jewelry	1	0	1	0	1	0	0	0	1
Practice Stroke in Golf	2	0	2	0	2	0	0	0	2
Praying	1	1	0	1	0	1	0	0	0
Shoe Lace	0	0	0	0	0	0	0	0	0
Always Putt Out in Golf	1	0	1	0	1	0	0	0	1
Cheers-Chants	1	0	1	0	1	0	0	0	1
Coins	0	0	0	0	0	0	0	0	0
Crossing Fingers	0	0	0	0	0	0	0	0	0
Handshake	1	1	0	0	1	0	1	0	0
Last One Out of Dressing Room	1	1	0	0	1	0	1	0	0
Music	1	0	1	0	1	0	0	0	1
Never do Same Thing Twice Before a Game	1	1	0	0	1	0	1	0	0

TABLE 6 (cont.)

Item	All Ss n=55	All M n=31	All F n=24	All Bl n=25	All Wh n=30	All Bl-M n=18	All Wh-M n=13	All Bl-F n=7	All Wh-F n=17
Specific Motions for Serving	1	0	1	0	1	0	0	0	1
Temperature (Weather)	1	1	0	0	1	0	1	0	0
Wipe Hands on Pants	1	0	1	0	1	0	0	0	1

* Ss--Subjects; M--Males; F--Females; Bl--Blacks; Wh--Whites;
Bl-M--Black Males; Wh-M--White Males; Bl-F--Black Females;
Wh-F--White Females

Racial comparison shows superstitions associated with equipment as claiming the highest black frequency (4:25) and superstitions associated with bouncing a basketball before a free throw as generating the highest white frequency (6:30).

Belief in sport superstitions generated even fewer responses than did practice of superstitions. These are reported in Table 7. Four responses indicate belief in superstitions related to bouncing a basketball before a free throw. For 16 of the 31 superstitions, athletes report no indication of belief.

Male subjects report 3 beliefs in superstitions associated with equipment. Female subjects' highest frequency per superstition was 2:24. Bouncing a basketball before a free throw, crossing yourself and numbers are each acknowledged to be believed by female subjects.

Black subjects' 3 responses to belief relate to equipment. White athletes did not endorse equipment, however 3 superstitions are endorsed by 2 of the athletes. These include bouncing a basketball before a free throw, crossing yourself and numbers.

Thirty-one sport superstitions are recorded by the 55 subjects. In all, the 55 athletes acknowledge some level of affiliation with superstitiousness. Each one of the 31 superstitious items listed in the inquiry are found to have been heard about. However, only 25 of these are practiced and but 14 are purportedly believed in by the subjects. It is noted that no more than 16 of the 55 athletes surveyed generated the above reported affiliations.

TABLE 7
Sport Superstitions

Frequencies Reported to be Believed

Item	All Ss* n=55	All M* n=31	All F* n=24	All Bl* n=25	All Wh* n=30	All Bl-M* n=18	All Wh-M* n=13	All Bl-F* n=7	All Wh-F* n=17
Procedure and Position for Free Throw	2	1	1	1	1	1	0	0	1
Bouncing Basket- ball Before Free Throw	4	2	2	2	2	2	0	0	2
Clothing Items	1	0	1	0	1	0	0	0	1
Crossing Yourself	2	0	2	0	2	0	0	0	2
Numbers	2	0	2	0	2	0	0	0	2
Equipment	3	3	0	3	0	3	0	0	0
Maintaining Con- stancy Follow- ing Victory	0	0	0	0	0	0	0	0	0
Warm-up	1	0	1	0	1	0	0	0	1
Bouncing Ball Before Serving	0	0	0	0	0	0	0	0	0
Bouncing Ball Spe- cific # of Times Before Serve	0	0	0	0	0	0	0	0	0
Charms	0	0	0	0	0	0	0	0	0
Food, Gum, Candy	0	0	0	0	0	0	0	0	0
Making First Shot in Basketball	1	1	0	1	0	1	0	0	0

TABLE 7 (cont.)

Item	A11 Ss n=55	A11 M n=31	A11 F n=24	A11 Bl n=25	A11 Wh n=30	A11 Bl-M n=18	A11 Wh-M n=13	A11 Bl-F n=7	A11 Wh-F n=17
Specific Motions for Serving	0	0	0	0	0	0	0	0	0
Temperature (Weather)	1	1	0	0	1	0	1	0	0
Wipe Hands On Pants	1	0	1	0	1	0	0	0	1

* Ss--Subjects; M--Males; F--Females; Bl--Blacks; Wh--Whites;
Bl-M--Black Males; Wh-M--White Males; Bl-F--Black Females;
Wh-F--White Females

Utilizing the frequency of reported affiliation and the researcher's notion that hearing about a sport superstition constitutes a lower level of affiliation than practicing a superstition or believing it, a compilation of responses is presented in the form of a sport superstition index. See Table 8.

Origin of Superstition

Table 9 reveals the responses to the question concerning the origin of both general superstitions and the sport superstitions. Forty-two of the 55 subjects associate friends at school with the origins of their superstitions. Subjects report that friends out of school (29:55), parents (26:55) and other relatives (25:55) are also sources of their knowledge of superstitions. Only 16 of the 55 subjects cite personal experience as an origin of their general superstitions. Athletes' responses to the question of the origin of their sport superstitions are somewhat evenly distributed among the 4 items suggested by the questionnaire. Nineteen of the 55 subjects identify a circumstantial event as originating their knowledge of sport superstitions. Teammates (13:55) and hearsay (12:55) are also associated with these beliefs and/or behaviors. Only 5 of the 55 subjects identify their coach as the origin of their sport superstitions. Write-in items by subjects to this question include habit and reinforcement.

Purpose of Sport Superstitions

Table 10 reports that 18 of the 55 subjects, 12 males and 6 females, consider that their sport superstitions serve no purpose. Thirty-two of the 55 athletes do indicate that a purpose is served by their superstitious behaviors and/or beliefs. Twenty-four athletes

TABLE 8
Sport Superstition Index
For Athlete Subgroups

Subject Groups	Level of Superstitious Affiliation*			SSI (Mean)	
	Heard Of fx1	Practice fx2	Believe In fx3		
All Males (31)	43 = 43	27 = 54	9 = 27	124	4.000
All Females (24)	67 = 67	30 = 60	13 = 39	166	6.916
All Blacks (25)	19 = 19	16 = 32	7 = 21	72	2.880
All Whites (30)	93 = 93	41 = 82	15 = 45	220	7.333
Black Males (18)	17 = 17	15 = 30	7 = 21	68	3.777
Black Females (7)	2 = 2	1 = 2	0 = 0	4	.571
White Males (13)	28 = 28	12 = 24	2 = 6	58	4.461
White Females (17)	65 = 65	29 = 58	13 = 39	162	9.529

* A value of 1, 2, 3 for each level of superstition was arbitrarily assigned by the investigator. See explanation p. 26.

TABLE 9
Origins of General and Sport Superstitions
Frequencies Reported

Origins	All Ss* n=55	All M* n=31	All F* n=24	All Bl* n=25	All Wh* n=30	All Bl-M* n=18	All Wh-M* n=13	All Bl-F* n=7	All Wh-F* n=17
General									
Parents	26	12	14	4	22	2	10	2	12
Relatives	25	11	14	7	18	4	7	3	11
Friends at School	42	22	20	15	27	10	12	5	15
Friends Out of School	29	16	13	13	16	8	8	5	8
Personal Experience	16	6	10	3	13	2	4	1	9
No Answer Given	3	3	0	2	1	2	1	0	0
Other	3	2	1	3	0	2	0	1	0
Sport									
Hearsay	12	6	6	6	6	5	1	1	5
Teammate	13	3	10	6	7	3	0	3	7
Coach	5	2	3	2	3	1	1	1	2
Circumstantial Event	19	7	12	5	14	4	3	1	11
No Answer Given	17	15	2	9	8	7	8	2	0
Other	7	4	3	1	6	1	3	0	3

* Ss--Subjects; M--Males; F--Females; Bl--Blacks; Wh--Whites;
Bl-M--Black Males; Wh-M--White Males; Bl-F--Black Females;
Wh-F--White Females

TABLE 10
 Purpose of Sport Superstitions
 Frequencies Reported

Purpose	All Ss* n=55	All M* n=31	All F* n=24	All Bl* n=25	All Wh* n=30	All Bl-M* n=18	All Wh-M* n=13	All Bl-F* n=7	All Wh-F* n=17
No Purpose	18	12	6	9	9	6	6	3	3
Yes, There is a Purpose	32	14	18	13	19	9	5	4	14
Reduce Tension	16	6	10	5	11	3	3	2	8
Create Right Frame of Mind	24	12	12	10	14	8	4	2	10
Insure Success	9	3	6	3	6	2	1	1	5
No Answer Given	5	5	0	3	2	3	2	0	0
Other	10	6	4	2	8	2	4	0	4

* Ss--Subjects; M--Males; F--Females; Bl--Blacks; Wh--Whites;
 Bl-M--Black Males; Wh-M--White Males; Bl-F--Black Females;
 Wh-F--White Females

believe their superstitions create the right frame of mind for their performance. Of these, 12 are males and 12 are females. Sixteen of the subjects, 6 males and 10 females, state that their superstitious behaviors and/or beliefs reduced tension. Only 9, 3 males and 6 females, consider that following the rituals set forth by superstitiousness insures success. Other purposes of sport superstitions suggested by the athletes are to insure consistency in performance and to create a proper mental state. These purposes were written in by the respondents.

Need Achievement and Belief in General Superstition

Responses to the Lynn Achievement Motivation Questionnaire yield a numerical score. Obtained values for each athlete are reported in Table 11. Also included in the table are the frequencies of belief in general superstition. Table 12 reveals mean values for each sample subgroup. In order to ascertain whether or not there is any correlation between these measures, a Kendall correlation of coefficient is calculated. The analysis was done at the UNC-G Computing Center utilizing a program from the Statistical Package for the Social Sciences. Obtained correlation coefficients are presented in Table 13. Obviously there is almost no relationship between the two sets of measures. The general similarity of obtained results for black males (-.209) and white females (-.216) is striking, though uninterpretable given the very meager sample.

Discussion

Differences Between Sexes

Given the limitations of this investigation, findings permit only a description of athletes' superstitiousness. Among the generalities discernible, however, is the comparability among males and females

TABLE 11

Need Achievement Scores and Frequency of
Belief in General Superstition

Male Ss*	nAch+ Score	Belief in General Superstition	Female Ss	nAch Score	Belief in General Superstition
1	6	13	32	5	0
2	4	0	33	6	0
3	6	0	34	7	0
4	6	0	35	7	0
5	3	0	36	5	0
6	5	0	37	5	0
7	7	0	38	5	2
8	3	1	39	5	0
9	8	0	40	5	4
10	4	0	41	4	3
11	6	0	42	3	1
12	6	1	43	6	0
13	6	0	44	7	2
14	7	0	45	6	0
15	7	0	46	6	0
16	4	10	47	6	0
17	4	0	48	2	4
18	7	0	49	7	1
19	7	0	50	4	0
20	3	0	51	5	0
21	4	0	52	2	0

TABLE 11 (cont.)

Male Ss	nAch Score	Belief in General Superstition	Female Ss	nAch Score	Belief in General Superstition
22	7	0	53	6	10
23	3	0	54	6	4
24	2	0	55	0	6
25	4	0			
26	5	0			
27	6	0			
28	6	0			
29	4	1			
30	5	0			
31	7	4			

TABLE 12
 Means of Need Achievement Scores
 and Belief in Superstition

Ss	nAch Score	Belief in General Superstition
All Subjects	5.09	1.21
All Males	5.62	.96
All Females	4.91	1.58
All Blacks	5.16	1.80
All Whites	5.03	.73
All Black Males	5.73	1.32
All White Males	5.00	.38
All Black Females	4.42	2.85
All White Females	5.11	1.00

TABLE 13
 Relationship Between Need Achievement and
 Athletes' Belief in Superstition

Group	N	Kendall Coefficient	Significance
Black Males	18	-.209	.113
White Males	13	.153	.234
Black Females	7	.162	.304
White Females	17	-.216	.113

in regard to "hearing about", "practicing" and "believing in" superstition. With regard to the type, extent of the belief, origin and purpose of the superstitions there also are more similarities between the sexes than differences.

Although high frequencies for females for superstitions purportedly "heard of" are obtained relative to personal and home items, higher frequencies are amassed by females than males for crossed bats and sticks and horseshoes over doors. Data gathered about females, although seeming to concur with Conklin's 1919 conclusions about the nature of womens' superstitions, are, at the same time, somewhat contradictory.

Female subjects generally report having "heard of" and "practiced" more sport superstitions than males. The writer suggests that the higher frequencies obtained in the present study may be due to the female population's willingness to be more openly honest in responding to the questionnaire. It might be speculated that male subjects associate an unstable emotional state and insecurity with superstitiousness and, therefore, are hesitant to admit to this weakness. However, in terms of "believing in" superstitions, frequencies for male and female athletes are similar. Inasmuch as this study interprets superstitiousness as the degree of belief in superstition, it follows, then, that the findings suggest a likeness in superstitiousness for both males and females particularly with regard to general superstitions. This finding clearly contradicts the conclusions of several studies cited in the literature review which propose that females are more superstitious than males, e.g. Conklin (1919), Emme (1941) and Wagner (1928). The data of this study

do not support generalities regarding differences between male and female collegiate athletes pertaining to both the degree of superstitiousness and types of superstitions they endorse.

Similar results are found among male and female subjects with regard to the origins of their general and sport superstitions. For both questionnaire items the most frequent response for males and for females is the same. Findings concur with the literature which attributes the origin of many superstitions to tradition, parental influence, chance circumstances, habit and reinforcement.

The question concerning the purpose of sport superstitions also yields data that are generally similar for athletes of both sexes. The findings support the literature which reports that confidence, the right frame of mind, reduction of tension due to fear and stress and previous success are reasons that explain superstition in sport.

Differences Between Races

Racial comparisons reveal surprising results to the researcher in that higher frequencies of superstitions are obtained for white athletes than for black athletes. The investigator's expectations are derived from the literature which points out that blacks are more superstitious than whites (Ter Keurst, 1939a). In the present study, the opposite result is obtained. White intercollegiate athletes are found to be more superstitious than black intercollegiate athletes.

Black and white subjects report similar origins for their general and sport superstitions. The most frequent response for blacks and whites is the same for general superstitions (friends at school). White athletes endorse a circumstantial event most frequently (14:30) for sport superstitions. Black athletes' endorsement is rather evenly distributed

among the four items suggested by the questionnaire: hearsay (6:25), teammate (6:25), coach (2:25), and circumstantial event (5:25). All together coaches are identified only 5 times by the athletes. This finding raises a question about the coach's influence on the athlete's superstitiousness. Further study into the relationship, if any, between coach and athlete superstitiousness is indicated by this finding.

Finally, it is pointed out that black and white athletes give similar responses to the question concerning the purpose of their sport superstitions. The creation of the right frame of mind is the most frequently endorsed of the items.

Similarities Among All Subjects

It is appropriate to conclude this discussion with a general comment to the effect that there are many more similarities between black and white/male and female collegiate athletes than there are differences. Once again, though, caution is indicated in the interpretation of such a remark inasmuch as the subjects of this inquiry constitute a biased and small sample. The inquiry form serves primarily to yield descriptive information which has potential value as a point of departure for a more extensive research endeavor.

CHAPTER V

CONCLUSIONS

Within the limits established for this inquiry, conclusions are offered to the questions posed in Chapter I. Also, considerations for future research are set forth.

Research Conclusions

1. To what extent are athletes superstitious?

The athletes included in this study affiliate, in varying degrees, with superstitious beliefs and behaviors. All 24 of the general superstitions included in the questionnaire are endorsed by 19 of the subjects. Further, the 55 subjects identify with 110 sport-related superstitions. Generally, however, athletes' superstitiousness does not appear to be of unusual magnitude.

2. About which superstitions are they knowledgeable?

The subjects indicate knowledge of various superstitious behaviors and beliefs. Of the general superstitions endorsed by 19 of the 55 subjects, most appear to be the type of superstitions Ter Keurst (1939a) classifies as the non-scientific, non-essential and irrelevant. The high frequency of responses to black cats (52:55), a rabbit's foot (52:55) and four leaf clovers (51:55) attests to this conclusion.

The sport superstitions endorsed include behaviors exhibited by the subjects prior to, during and following a contest. A wide range of sport superstitions are listed, all of which are concerned

with the athlete's success in his or her athletic performance. Taking a free throw in basketball (30:55), clothing items (10:55) and lucky numbers (6:55) are examples of the superstitions listed by the athletes.

3. Which superstitions do they practice?

Non-scientific types of superstitions are most popular among athletes. Wishing luck (25:55), crossing fingers (25:55) and luck associated with wishbones (24:55) are the most highly "practiced" general superstitions. Most often "practiced" are the general superstitions usually transferred through social and cultural interaction. Only one of the 24 general superstitions "heard of" by the subjects is not "practiced."

Of the 110 sport superstitions studied, only 57 are "practiced" by the athletes. Superstitions involving the free throw in basketball are relatively frequently endorsed (15:57). Clothing items (7:57) and numbers (6:57) are also acknowledged by some of the subjects. Six of the sport superstitions "heard of" by the athletes are not "practiced" by any of the subjects.

4. In which superstitions do they believe?

All but 3 of the general superstitions listed in the questionnaire are "believed in" by the athletes. Wishing luck (9:55), crossing fingers (7:55), clothing items (6:55), charms (5:55), four leaf clovers (5:55) and black cats (4:55) register endorsements by approximately 10% of the subjects.

Only 22 of the 110 sport superstitions "heard of" and the 57 "practiced" are "believed" by the subjects. Superstitions associated with free throws in basketball generate 6 of the 22. Superstitions specific to basketball account for 7 of the 22 believed by the subjects. None of the 22 relate specifically to tennis. The remaining 15 sport superstitions are not sport-specific.

5. How do male and female athletes compare in their superstitious knowledges, practices and beliefs?

A comparison of male and female superstitiousness reveals greater similarity among the two groups than differences. While females responded with somewhat higher frequencies than males, the superstitions endorsed are generally the same.

6. What are the stated origins of the superstitions believed in and/or practiced by athletes?

Friends appear to be the origin of the subjects' general superstitions. Social interaction and tradition are considered by the athletes to play a role in maintaining these beliefs and behaviors over the years. Personal experience registers the lowest frequency of response (16:55) in the general superstition category.

The origins of sport superstitions are most often associated with a circumstantial event. Seventeen of the subjects offered no answers to questions about the origin of sport superstitions. In comparison only 3 athletes failed to identify origins of the general superstitions.

7. What purpose, if any, do athletes consider their sport superstitions serve?

Thirty-two of the 55 athletes believe their sport superstitions serve a purpose. To create a right frame of mind (24:55) and tension reduction (16:55) are endorsed most often. Only 9 of the 55 subjects seem to be convinced that following the ritual set forth by their superstitious behaviors and beliefs insures successful performance.

8. How do black and white athletes compare in their superstitious knowledges, practices and beliefs?

The superstitions endorsed by black and white subjects are similar. Frequencies of endorsement, however, seem to indicate that the white athletes affiliate more with superstitious behaviors and/or beliefs. A substantially larger frequency is found for white athletes for general superstitions "heard of" and "practiced" and for sport superstitions "heard of", "practiced" and "believed". In only one category, general superstitions believed, do black subjects (43:25) register a higher frequency than the white subjects (21:30).

9. Does a relationship exist between belief in superstition and need achievement?

Kendall Coefficient of Correlation reveals no significant relationship between the two measures.

Research Implications

The study of the emotions, beliefs and behaviors of individuals and groups is a difficult undertaking. The following suggestions are made to aid investigators who might seek to answer some of the many questions inherent in the study of superstition in sport.

Further research which seeks to compare the sexes and races is appropriate. However, a large sample must be studied which permits rigorous statistical analysis of findings. Comparisons between athletes and non-athletes would also be revealing and might yield insight into the possible uniqueness of the athletic population. More meaningful research of this topic could be obtained if the use of a questionnaire were verified with game observations.

Investigation into the superstitions of high school and professional athletes might also prove insightful. Comparison of this subject at all levels of athletic performance would add an important dimension to the understanding of the issues namely, the possible relationship of superstitiousness to the intensity of sport demands and various degrees of commitment to competition by the athlete.

The study of superstitious behaviors, oftentimes unconscious, is a difficult undertaking. Future investigators must be aware of the inherent complications involved in research about this subject. However, the status of superstition in sport and its affect on the athlete psychologically as well as its possible effect on actual performance warrants study. The writer considers such research to be challenging and appropriate to the scientific study of sport.

Critique

At the time this investigation was conceptualized and planned, the researcher held the hope that the results might contribute to understandings about athletes and/or superstitions. In retrospect, however, certain flaws in the design details and unforeseen problems in

data gathering caused the outcome to be somewhat less than expected. Nevertheless, if viewed as a pilot effort, certain aspects of the study do provide direction for future endeavors of this type.

The use of a biased sample with broad standards for "admission" into the study is always open to criticism. A more carefully selected sample, one that acknowledges breadth and intensity of sport experiences would possibly give more credibility to the data.

The use of the word superstition on the inquiry form may have influenced the subject's predisposition to give completely honest responses. Complete statements, such as "missing the last shot during warm-up before a basketball game is bad luck," rather than cue words may prove more effective. Filler items should also be included to counteract the possibilities of a response set.

Although it is logical to assume there are different intensities of superstitiousness; e.g., the level of practicing something as compared to believing in the effects of superstitious behavior, such a notion does not readily lend to testing by the arbitrary assignment of numerical values. It might be just as fruitful to combine practicing and believing in one broad category. In the present study, separate identification of these levels did not contribute to the findings.

It should be noted that situational variables like size of school attended and related geographic information could possibly influence one's predisposition to behave superstitiously. Items of this type should possibly be obtained with other background information and then accounted for in the data analysis.

A forced choice instrument that yields an exact number of responses lends to a variety of statistical techniques. The type of instrument used in this study greatly limited the analysis. This is recognized as a serious weakness in the research.

Lastly, the verification of responses to a paper and pencil form with subsequent interviews or specific observation could add to the reliability of the obtained data.

Specification of the weaknesses of the study is offered by the investigator as guidance to others who may pursue the study of a similar complex problem.

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SUPERSTITIONS OF ATHLETES

QUESTIONNAIRE

APPENDIX A

SUPERSTITIONS OF ATHLETES QUESTIONNAIRE

1. Are you a member of any athletic organization? (Yes/No)

2. If yes, what is the name of the organization? (Please specify)

3. How long have you been a member of this organization? (Please specify)

4. Do you believe in superstitions? (Yes/No)

5. If yes, what are the superstitions you believe in? (Please specify)

6. How often do you experience these superstitions? (Please specify)

7. Do you think these superstitions affect your performance? (Yes/No)

SUPERSTITIONS OF ATHLETES

74

QUESTIONNAIRE

PART I: GENERAL BACKGROUND INFORMATION

1. How old were you on your last birthday? WRITE HERE: _____
2. What is your sex? CHECK (X): _____ Male _____ Female
3. What racial group are you a member? WRITE HERE: _____
4. Of which collegiate team are you a member? CHECK (X) ONE OF THE CHOICES BELOW:
Basketball _____ Tennis _____ Both _____
5. Have you ever played on any other collegiate team? CHECK (X):
Yes _____ Specify _____ # of years _____
No _____
6. In terms of formal religion, what do you consider yourself to be?
CHECK (X) ONE OF THE CHOICES BELOW:
_____ Deeply Religious _____ Opposed to Religion
_____ Moderately Religious _____ Do Not Wish to Answer
_____ Indifferent to Religion
7. What is your religious affiliation? CHECK (X) ONE OF THE CHOICES BELOW:
_____ Catholic _____ Methodist
_____ Jewish _____ Presbyterian
_____ Baptist _____ Other, and specify: _____
_____ Episcopalian _____ None
_____ Lutheran _____ Do Not Wish to Answer
8. What is your class (Freshman, Sophomore, Junior, Senior)?
WRITE HERE: _____

ANSWER THE FOLLOWING QUESTIONS BY CIRCLING EITHER YES OR NO. EVEN IF IT IS HARD TO MAKE A DECISION, ANSWER ALL QUESTIONS.

9. Do you find it easy to relax completely when you are on a holiday?
YES NO
10. Do you feel annoyed when people are not punctual for appointments?
YES NO
11. Do you dislike seeing things wasted?
YES NO
12. Do you like getting drunk?
YES NO
13. Do you find it easy to forget about your work outside of normal working hours?
YES NO

14. Would you prefer to work with a competent but incompetent partner, rather than a difficult but highly competent one?
 YES NO
15. Does inefficiency make you angry?
 YES NO
16. Have you always worked hard in order to be among the best in your field?
 YES NO

PART II: GENERAL SUPERSTITIONS

17. For each of the superstitions (notions related to luck and fate) listed in the two columns below, check (X) the column headed HEARD if you have heard of the superstition. Place a check (X) in the column headed PRACTICE if you have at sometime practiced the superstition. Check (X) the column headed BELIEVE if you believe in the superstition. These may or may not be related to sport.

SUPERSTITION	HEARD	PRACTICE	BELIEVE	SUPERSTITION	HEARD	PRACTICE	BELIEVE
Black Cats				Opening Umbrella Indoors			
Broken Mirrors				Playing Cards			
Bugs/Insects				Rabbit's Foot			
Charms				Sidewalk Cracks			
Clothing Items				Sunrise-Sunset			
Colors				Touching Wood			
Crossed Bats, Sticks, etc.				Walking Under Ladders			
Crossing Fingers				Wishbones			
Crossing Yourself				Wishing Luck			
Four Leaf Clover				OTHERS (PLEASE SPECIFY)			
Funerals							
Horseshoe Over Door							
Howling Dogs							
Lucky Coin							
Lucky/Unlucky Numbers							

18. From whom did you learn those beliefs related to luck and fate?
 CHECK (X) AS MANY AS ARE APPROPRIATE:
- _____ Parents and/or guardians
- _____ Relatives (grandparents, aunts, cousins, etc.)
- _____ Friends or acquaintances at school
- _____ Friends or acquaintances outside of school (e.g. friends at camps, etc.)
- _____ Personal experiences
- _____ Other, and specify: _____

