CHAPTER III

REVIEW OF RELATED LITERATURE

3.1 INTRODUCTION

This chapter presents a review of research work done in the area of the proposed investigation. Best explains that “the research reference materials is a time consuming but fruitful phase of graduate programme”.

The purpose of literature collection are as follows:

1. Innovative ideas and reforms are being introduced almost in all fields of study. Hence it becomes necessary to review all earlier works and findings so that a deep insight and a clear perspective of the field can be brought out.

2. The review will provide information about research completed allied to the study undertaken.

3. Provide ideas, theories, explanations, or hypotheses valuable in understanding and formulating the research pattern to deal with the problem.

4. Identify research and statistical analysis of data employed by others.

5. Locate comparable material useful in interpreting the results.
6. Understand the significance of the research.

7. To serve as a background for the written research report.

Hence a few such available literature have been reviewed here to provide for a background material.

Cullam conducted a study "To evaluate and compare the existing physical education programmes for women at the University of South Carolina with other State-co-educational Institutions.

The data were collected by means of questionnaire from 144 women who had been in requirement of physical education at least three semesters at the University.

On conclusion, it was found that:

1. In general the programmes compared favourably with those in other state co-educational institutions.

2. Students considered the programmes valuable.

3. The primary criticism by students were inadequate facilities, variety in course offering and number of instructions.
Agarwal, S.K., (1975) conducted a study on "A Psycho-social study of Academic under – achievement at Secondary School level in the State of Rajasthan".

The major findings of the investigation were:

1. The under achievers were comparatively less emotional, less calm, less placid, less prone to getting into difficulties and less able to face reality and processed less ego-strength than the over-achievers.

2. The over achievers had stronger educational, social and humanistic values than the under achievers, but on the remaining three values – materialistic, religious and personal – the two groups were alike.

The findings of the study by Sharma, D.V (1984) "Socio-Psychological Differentials of non-sportsman and University representing.

1. Eight significant factors emerged in University – representing sportsmen, namely, socio-economic status, self concept, adjustment Vs Anxiety, mental ability, independence Vs Subduedness, alert, poise Vs tender minded, emotionality and introversion Vs extraversion.

2. Seven factors were identified in non-sportsman, namely adjustment Vs anxiety, Professional status, extraversion Vs introversion, subduedness Vs independence, mental ability, socio-economic status, tender minded and emotionality Vs alert poise.
MOTOR PERFORMANCE

Martens and Landers conducted a study on, "Motor Performance under stress". They tested the inverted 'U' hypothesis by examining the interaction between trait and changing anxiety states on motor behaviour. They selected low, moderate and high trait – anxiety junior high school boys and subjected them to a low, moderate and high stress or (fear of physical pain). Palmar sweat prints, heart rates and subjective stress reports were obtained from each subject to determine the experimental manipulation of state anxiety.

The performance results supported the inverted 'U' hypothesis separately for trait anxiety and state anxiety. That is, the moderate – trait anxiety. That is the moderate – trait – anxiety group performed significantly better on a tracking task than the low and high trait – anxiety groups, regardless of the stress condition. Similarly, the moderate stress group performed significantly better than the low or higher stress groups, regardless of the trait anxiety level.

MOTOR ABILITY

Larson constructed the following two general motor ability tests for college men, one as an indoor test and the other as an outdoor test, after experimenting with 25 motor ability items. Indoor test: dodging run, bar-snap
chinning, dripping vertical jump. Out door test: Baseball throw for distance, chinning, bar snap, vertical jump. The multiple correlations with the criterion measure were for the indoor test $R=0.097$ for the outdoor test, $R=0.98$. According to Larson, the test do not predict or indicate specific qualities, such as endurance, co-ordination, sports skills, and so forth. They are valuable in that they do indicate ability in the basic elements underlying sports skills.

Shelley investigated the maturity structure. Strength, motor ability and intelligence test profiles of outstanding elementary school and junior high school athletes. He concluded that the athletes were found to be superior to non-athletes in performance on test items related to general motor ability.

COMPETITION AND ANXIETY

Ford (1968) conducted a study on “Anxiety in Non-competitive and pre-competitive situations involving Inter-Collegiate football players”.

In the conclusion, Ford found that some competitors did better when their anxiety levels were high and that moderate levels of anxiety seemed to elicit increases in performance.
The finding of the study "the effects of a competitive situation upon the motor performance of High Anxious and Low Anxious Boys" by McGowan (1969) was that, the basketball players scoring moderately high in a test of anxiety performed better in competitive situation than did those with lower anxiety scores.

Gould, Horn and Spreeman (1983) studied the competitive anxiety of approximately 1000 junior elite wrestlers who were participating in the United States Wrestling Federation (USWF) Junior National Greco Roman or Freestyle Championships. A questionnaire was designed to assess wrestler anxiety and anxiety-related responses. As part of their data analysis, they looked at differences in the anxiety responses of high versus low sport competitive Anxiety Test participants. The low SCAT wrestlers had lower anxiety responses as compared with the high SCAT wrestlers.

It was also found that low SCAT wrestlers compared to high SCAT wrestlers rated themselves higher in ability, predicted that they would finish higher in the tournament, were more confident in their tournament prediction, worried in a few number of all matches, felt their nervousness less often hurt their performance, had less trouble sleeping, and thought it was more important to their parents that they wrestle well.
**COMPETITION T-ANXIETY**

The effect of competition T-anxiety and success-failure on the perception of threat in a competitive situation was studied by Scanlan, Tara Kost. The purpose was to determine the consequence of competition trait anxiety and success-failure on the perception of threat to self and how perceived threat is responded to in terms of S-anxiety and self protective behaviour. S-anxiety was assessed by palmar sweating and Spielberger’s state anxiety scale from the State-Trait anxiety inventory for children. Self-protective behaviour was assessed by casual attribution, preference for opponents for social comparison of others.

Sports competition anxiety test was administered to 306 boys of 10 to 12 years of age. 42 high competition trait anxious and 42 low competition trait anxious were selected as subject.

Success-failure was manipulated by the win percentage achieved when competing against an opponent of purported equal initial ability. The subjects won a pre-determined 80% (high success), 50% (moderate) and 20% (failure) of the 20 traits on the competition game. The game, referred to as the motor maze, was a complex motor task involving speed, accuracy and anticipatory timing.
The results from both state anxiety measures indicated that highly evaluated competitive situation induced apprehension and tension and was therefore psychologically stressful. The state anxiety scale, social comparison and observational data provided strong evidence that the success-failure experiences induced differential levels of perceived threat. A significant reduction in perceived threat, no changes and a significant increase was indicated by success, moderate success and failure groups respectively.

The casual attribution findings indicated that when the casual relationships between ability and outcome was clear and when social evaluation was expected, the failure subjects made internal casual ascription rather than self protective external ascription. However failure subjects did tend to evidence self protective behaviour when making casual ascription on the stability dimension. Success individuals, as expected did not engage in self protective behaviour on either the internal – external or the stable-unstable dimensions.

The opponent preference findings indicated that regardless of perceived threat, individuals of all those success failure groups selected opponents of equal relative ability.
The social comparison results indicated that when maximum information could be gained which might facilitate performance in an anticipation future competition, then subjects in all three success-failure groups sought maximum information by comparing with a top ranked other. Defensive behaviour occurred only in the failure groups when public appraisal was anticipated with constructive cause of action available.

The conclusions of the study, “The effects of state Trait Anxiety, psychological stress and intelligence on learning and Academic Achievement” by Ravinder (1977) were:

1. Ego stress and anxiety state effects were similar.

2. Anxiety as a main effect, was not significantly related to academic achievement, except in the case of achievement in general Science and Mathematics.

3. High aptitude students tended to perform better than low aptitude students irrespective of the anxiety level.

4. General anxiety by itself had relatively little effect on academic achievement and the combination of anxiety with intelligence considerably increased the accuracy of predicting academic performance.

In one of the earliest studies designed specifically to investigate aspects of social and psychological dimensions of youth sports, Scanlan and Passer [97]
studied "the effects of competitive trait anxiety and game win or loss on children's perception of threat to self esteem". Subjects were 11 and 12 year old boys participating in two divisions of the American Youth Soccer Organisation (AYSO). The assessment instruments were Marten's Sports Competitive Anxiety Test (SCAT) and Spielberger's State-Trait Anxiety Inventory for Children (SAIC).

The findings indicated that there was indeed a relationship between level of competitive A-trait and state anxiety the players demonstrated just before the match. It was also shown that players on losing teams exhibited elevated levels of post game A-state as compared with players on winning team. This would indicate that the outcome of the match in terms of success or failure can affect post game psychological states such as anxiety.

Weinberg and Genuchi studied the 'Relationship between competitive trait anxiety, state anxiety and golf performance'.

Using scores from SCAT, Weinberg and Genuchi classified male inter collegiate golfers as being high, moderate or low in trait anxiety. All golfers were involved in a tournament that included a practice round and three consecutive rounds of competition. Using Spielberger and other's SA1 state anxiety was assessed for the low, moderate and high SCAT groups.
The results show that high trait performers exhibited higher degrees of state anxiety as compared with both the moderate and low trait anxious groups. The level of A-state increased from the practice round to the first day of competition. This same effect was not evidenced on the last day of competition.

It was also found that low trait-anxious golfers performed significantly better than either the moderate or high trait anxious performers.

Huddleston and Gill conducted a study on 'State anxiety as a function of skill level and proximity to competition.'

They were interested in the pattern of state anxiety exhibited by female track and field participants during both practice and actual competition. They measured A-state at four different times, pre-practice, post-practice, pre-meet and pre-event.

It was found that there was a drop in anxiety level after practice. The highest degree of anxiety was found just before the event.

Gruber and Beauchamp studied the A-state reaction of female collegiate basketball players as a result of both the importance and outcome of the game. Games were classified as either easy or difficult. All of the easy games were
won and all of the crucial games were lost. Their findings showed a strong
relationship between the degree of threat in the social situation and the level of
state anxiety. The players were significantly more anxious before the crucial
games than before the easy games. In addition, A-state was lower after all the
games that were won as compared with the games that were lost.

**Trait and State Anxiety**

An investigation of the interactive causal influence of trait and state
anxiety on academic achievement was conducted by Heinrich, Darlene. The
study examined a theoretical model derived from Drive theory and trait state
anxiety theory which posits that T-anxiety (A-Trait) influence academic
achievement.

86 Students enrolled in a graduate education course were selected as
subjects. A-state and A-trait were measured three timings during the course.
GRE scores were used as measured of intellectual ability. Frequency of change
in product moment technique was used to analyze the data.

It was found that A-trait influenced A-state and A-state was found to
influence achievement in as many cases as achievement influenced A-state.
Results suggested that A-trait may have a direct influence on it through A-state.
When intellectual ability was considered, there was a tendency for A-trait to influence A-state and achievement, but only for high ability students. The relationship between A-state and achievement remained ambiguous. The direction of causal influence was not identified in any analysis.

Klavora studied changes in A-state of high school football and basketball players using Spielberger and others STAI.

The A-state was found one week before a game, 30 minutes before a regular season game, and 30 minutes before tournament play-offs. High A-trait participants in both football and basketball were higher in A-state across all three measurement times. However, both high and low A-trait players demonstrated increases in A-state before both competitive situations as compared with the practice period. There was no difference in state anxiety between the regular season and the tournament play-off game.

**S-ANXIETY T-ANXIETY**

Millo, Maria Domata conducted a study on S-Anxiety T-Anxiety, defense mechanism and personality in three individual sports groups. This study investigated the manifestation of naturally occurring and non-stimulated anxiety in a situationally ego threatening experience. The subjects were drawn
from three individual sports group (Marathoners, Tennis Players and Archers) and data were collected in connection with important competitions.

The state anxiety measure (STAI) was administered two weeks prior to competition, evening before, immediately precompetition, immediately post competition and two weeks after. The results of the study showed that state anxiety scores for the total sample of athletes changed significantly in relation to sports competitions.

S-anxiety (Pre-competition) as expected in terms of motor requirements was highest in Marathoners, second in Tennis players and lowest in Archers.

S-anxiety was divided into low, moderate and high categories. Successful athletes had moderate anxiety level.

"The relationship between trait and state anxiety, movement satisfactory and participation in physical activities" was investigated by Burton. Male and female college students in selected activity classes were given the State-Trait Anxiety Inventory (STAI) and the movement satisfaction scale before and after a 15 week with lower movement satisfaction scores than the low A-trait subjects on both pretests and post tests. No changes was found in the A-state...
level of the low A-trait group, but the A-state level of the high A-trait group decreased significantly over the treatment period. The correlation between STAI and movement satisfaction at both pre-test and post-test ranged from r=0.25 to 0.44.

Dorsey, Joseph (1976) conducted a study on "The effects of bio-feedback assisted desensitization training on state anxiety and performance of college age male gymnasts". The purpose of the study was to determine the effect of EMG bio-feed back-assisted relaxation training and traditional relaxation training on the control of state anxiety. A further purpose was to determine whether gymnastics performance could be improved as a result of this training.

Subjects (N=25) were randomly placed in one of three groups: an EMG feed back group, a relaxation group and a control group. Treatments in relaxation for the bio-feedback and relaxation groups were administered twice a week for three weeks. Desensitization training was then administered for an additional three weeks. The control groups received no special treatment after baseline measures were recorded for the study. Anxiety levels were measured using the spielberger's State - Trait anxiety inventory. Relaxation levels were measured with a cyborg p433 Electromyographic instrument. The gymnastics performance measures were obtained through competitions judged by card holders of the National Gymnastic Judges Association.
STAI was administered prior to registration in September 1974 and January 1976.

Treatment consisted of 2 hours theory and 2 hours pool practical each week for 11 weeks.

Three hypotheses were made utilising SCUBA diving instruction as the high anxiety medium.

1. There is no change in anxiety level as a result of a course of instruction in SCUBA diving.

2. There are no differences in anxiety between the general population and those who select SCUBA diving.

3. Anxiety has no value as a predictive device of success or failure in SCUBA diving.

The following results were obtaining from the study:

1. T-anxiety was found to be relatively stable over time and exposure to a high anxiety sport.

2. S-anxiety was not altered by exposure to a high anxiety sport.

3. High anxiety sport tend to be the domain of persons low in T-anxiety.
4. Anxiety has no value as a predictive device of success in SCUBA diving instructions.

DAVID (1976) studied 'The effects of anxiety and activation on athletic performance'. The purpose of the study was to explore the following issues:

1. Extent to which anxiety and activation can be measured separately and how they individually and jointly affect motor performance.

2. Extent to which task complexity affects the studied "Psychological states / athletic performance".

3. The value of competitive attention during play.

Klavora used Spielberger and other state-trait Anxiety Inventory (STAI) to assess the state and trait anxiety scores of boys in a high school basketball league. The A-state scale was administered before each game. The A-trait scale was administered once before the start of the season and again either during the playing season or immediately after the end of the season.

The major purpose of the study was to explore the relationship between basketball playing performance and the athletes pre-competitive state-anxiety. More specifically, an attempt was made to derive inverted-U functions on the basis of pre-competitive state anxiety and player performance.
Klavora's findings indicated that overall ratings of poor performance were associated with either too little state anxiety or excessive anxiety. Average performances were related to moderately low or moderately high state anxiety levels. Outstanding performances were associated with the optimum level of state anxiety. These data support for the hypothesized relationships contained within the inverted U-function.

Agarwal S.K. (1975) conducted a study on "A Psycho-social study of Academic under-achievement at secondary school level in the state of Rajasthan".

The major findings of the investigation were:

1) The under achievers were comparatively less emotional, less calm, less placid, less prone to getting into difficulties and less able to face reality and possessed less ego-strength than the other – achievers.

2) The over achievers had stronger educational, social and humanistic values than the under achievers, but on the remaining three values – materialistic, religious and personal the two groups were alike.
Anxiety and Performance

Pandit K.L. conducted a study on “The role of anxiety in learning and academic achievement of children”. (1969)

The important findings were:

1. Anxiety bore a negative relationship with learning and academic achievement.

2. Subjects having less anxiety were found superior in learning and achievement irrespective of the task difficulty to those having more anxiety.

3. High learners and achievers were more anxious than low achievers and learners in motivating content situations.

4. Subjects with low intelligence and high anxiety did not improve in achievement up to the expectations as a result of induced anxiety.

5. Anxiety interfered with the retention of learning.

UCLA Football teams and coaches during 1975-76 seasons were selected as subjects. Usable measures were obtained from 39 players. These measured included resting pulse rate, players self ratings of anxiety and
activation levels and coaches’ ratings of players performances. The coaches also rated the task complexity of each football position.

It was found that:

1. Anxiety and activation can be empirically distinguished.

2. There is no simple, linear relationship between anxiety and activation, or between these states and athletic performance.

3. Both state and Trait notions of anxiety and activation are relevant.

4. Anxiety does differentially affect athletic performance based on the varying demands of the tasks involved.

Rembisz, Ronald Stanely, studied on “Heart beat, performance and anxiety”.

This study investigated the effect of auditory stimuli on performance of college students with high and low debilitating anxiety. Sample consisted of 48 males and 24 females between the age of 17 and 25 enrolled in classes at Texas Teach University.

Level of Test anxiety was measured by use of Alpert – Haber Achievement Anxiety Test (AAT). Performance was measured by use of arithmetic test consisting of addition of one digit numbers.
The following hypotheses were made:

1. There will be no difference in performance between subjects expressed to recorded Amplified Human Heart Beat Sound (RAHHS) and subjects exposed to white noise.

Gruber and Beauchamp (1979) administered a 10 item short form of state anxiety inventory (CSAI) to 12 members of a University Women’s Versity basketball team on 16 different occasions, before and after 2 practice sessions (base-line data) and before and after 3 easy and 3 crucial games.

It was found that state anxiety was significantly reduced after the 3 easy games the players won, but remained high after the 3 crucial games they lost. The subjects exhibited significantly more anxiety before the crucial games than before the easy games.

Sonstroem and Bernardo conducted a study on “Intra individual Pregame state anxiety and basketball performance”.

They tested the fit of the inverted hypotheses of female collegiate basketball players. Competitive trait anxiety was assessed before the session through the sport competition anxiety test (SCAT) and competitive state anxiety was measured through the anxiety Inventory. (CSAI) the CSI was
administered to all athletes between 20 to 30 minutes before each game in a basketball tournament.

It was found that strong linear relationship exist, between, persons characterized by differences in A-trait and scores on the A-state measure. High trait anxious persons showed consistently higher levels of state anxiety as compared with both the moderate and low groups.

Furthermore it was found that the performance of all the players was at the peak when the anxiety level was moderate.

**PHYSICAL ACTIVITY ON STATE ANXIETY**

Maryan studied the 'Influence of acute physical activity on state anxiety'.

The anxiety of 40 adult men before exercise, immediately after exercise, and after 30 minutes of recovery were studied. These data indicate that vigorous exercise does produce increase in both lactate and state anxiety. However, after a very short period of time, anxiety was lower than it was at rest.
Bird, Ravizza and Reis contrasted anxiety reduction effects for college students enrolled in either tennis or Hatha Yoga classes. Their findings showed that participation in either activity had similar effects. State anxiety was reduced systematically across time, regardless of the nature of the physical activity.

COMPETITIVE BOWLING AND A-STATE SCORES

Hall and Purvis studied both competitive bowling performance and the A-state scores of students who were initially classified as being either high or low in A-Trait. Consistent with theoretical prediction, they found that lower precompetitive and competitive averages were related to higher levels of A-state. In addition, A-trait subjects tended to have higher levels of A-state under competitive situations/conditions.

Simon and Martens studied the A-state changes that occur as a result of both the nature of the competition itself and the temporal location (time) of that situation. The subjects were high school female basketball players. Twelve situations that could occur as a consequence of playing basketball were rank ordered and the A-state the players experienced in each of those situations was assessed. Their findings show strong support for the predicted relationship
between the perception of threat in competitive situations and systematic changes in state anxiety.

**Psychological Factors and Cognitive Strategies**

Mohoney and Avener, in a 1977 study, conducted an exploratory study to gather information on various psychological factors and cognitive strategies used by elite gymnasts. They studied the six athletes, who qualified for the 1976 U.S. Olympic team versus the six contenders who did not qualify. Their statistical procedure determined correlations among a large number of possible variables. Mohoney and Avener found relatively small differences between the two groups before the actual competition, but those differences indicated that the qualifiers tended to be more anxious. Of more importance that the qualifiers tended to be more anxious. Of more importance is the pattern of anxiety demonstrated by the two groups during actual performance. Although both groups reported being anxious, the qualifiers were relatively less anxious as compared with the non-qualifiers.

Highlen and Bennett, in a 1977 study, studied the "Psychological characteristics of successful and non-successful elite wrestlers."
The wrestlers represented the most skilled 10% in terms of skill of all Canadian wrestlers. Comparisons were made between qualifiers and non-qualifiers for selected wrestling tournaments. It was found that the qualifiers reported less stress during both the pre-competitive period and the competition.

Although the qualifiers were consistently lower in anxiety before and during wrestling competitions, both groups exhibited extremely high levels of anxiety during anticipation of competing against a tough opponent as compared to the level of anxiety during actual performance against that opponent. This trend was evidenced again during anticipation and actual performance against a weak opponent but not nearly to the same extent. Also, during the week before and the day before actual competition, anxiety levels were higher than they were during actual performance.

STRESS

Various sources of competitive stress evidence by young women participating in two divisions of the American Youth Soccer Organisation was studied by Scanlan and Passer (1979).

Competitive Stress was measured by Spielberger's State trait anxiety Inventory for children. Assessments were made before and immediately after a Soccer match. Although they made other comparisons, team outcome was
again shown to be the prominent variable associated with the level of post competitive anxiety. The results indicated that players on losing teams exhibited higher degrees of state anxiety as compared with players of winning teams.

However, the players perceptions concerning the amount of fun experienced during the game also affected the post game level of state anxiety. Players who indicated that they had experienced less fun during the game showed higher degrees of postgame state anxiety as compared with players who perceived themselves as having experienced more enjoyment.

Gould, Horn and Spreemann addressed the question of 'the cause of sources of stress in young elite wrestlers'.

One interesting aspect is that there is no single cause of stress experienced by all of the wrestlers. The highest ranked source of stress was concern about performing up to ability level. Therefore, these findings, indicate that there is a large of individual variability in the potential sources of stress for individual wrestling participants.
STATE-TRAIT APPROACH

Weingberg and others (Weingberg, Weinberg and Hunt; Weingberg and Ragan) have conducted a series of studies using the state-trait approach for testing the inverted-U hypothesis. Weinberg and Hunt used the T-anxiety inventory (TAI) to select 10 high-anxious and 10 low-anxious subjects from an initial pool of 175 college men. Their experimental paradigm also involved the use of electromyography. Surface electrodes were placed on two antagonistic muscles from the upper arm.

After arriving at the experimental site, the electrodes were put in place and state anxiety was measured. The task was to throw a ball at a target containing three concentric circles. Each subject had 10 throws, with the scoring as follows:

5 points of hitting the red area, 3 for the yellow area and 1 for the blue area. After completing the 10 throws, all subjects received negative, false feedback that indicated they had performed poorly compared with other college students. Subjects then completed 10 more throws, followed by a second measure of A-state. The findings indicated that:
1. Significantly more A-state was evidenced in the high A-trait group as compared with the low A-trait group.

2. The low A-trait group had better motor performance than the high A-trait group.

3. The high A-trait group demonstrated inefficient use of muscle energy as compared with the low A-trait group. The high A-trait group exhibited cocontraction of agonists and antagonists, where as the low A-trait subjects showed a sequential pattern of muscle firing.

**TRAIT STATE AND ACADEMIC / TEST ANXIETY**

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Thompson, Margaret Anne, studied "Trait state and academic / test anxiety. Their relationship to reading performance". The purpose of the study was to examine the relationship between reading speed and comprehension and several kinds of anxiety.

The subjects were 127 volunteer freshman women associate degree nursing students.

Reading speed and comprehension were assessed by the McGraw Hill basic skills system tests. Within task S-anxiety was assessed by the state portion of the STA1 and general trait anxiety by the trait portion of the same instrument. Academic test anxiety was measured by the 'Test anxiety scale' and the achievement anxiety test. Intelligence was examined as an innervating variable and measuring by the quick word test.
The following hypotheses were made:

1. All measure of anxiety would be inversely and significantly correlated with all reading performance measured and positively and significantly correlated among themselves.

2. In correlation, regression and ANOVA analyses, within task S-anxiety would be most closely related to reading performance, academic / test anxiety next most closely related and general trait anxiety least closely related.

3. In a multiple regression equation each of the various kinds of anxiety would add significantly to prediction of reading performance.

4. On all measured of anxiety, low anxiety students would perform best, and high anxiety students would perform worst, with medium anxiety students in between.

**CONCLUSION**

From the results obtained the following conclusions were made:

1. Reading is typical of difficult cognitive tasks in its relationship to anxiety. In general students with high anxiety tended to read more slowly and with comprehension than those with low anxiety.

2. Within task S-anxiety is not more strong related to reading performance than academic / test or general anxiety for a low stress reading task.

3. Little evidence of an anxiety intelligence interaction effect on reading performance was found.