Chapter II

REVIEW OF RELATED LITERATURE

Familiarity with the literature related to any problem helps the scholar to discover what is already known, what others have attempted to find out, what methods of approach have been promising or disappointing and what problems remain unsolved. The review would enable the investigator to have a deep insight, clear perspective and a better understanding of the chosen problem and various factors connected with his study.

The investigator reviewed related literature on the following heads:

1. Related literature on Locus of control
2. Related literature on interpersonal relationship

2.1 Related literature on locus of control

Anshel M. (1996) reported that the use of approach and avoidance coping styles and task-focused and emotion-focused coping strategies in competitive sport was explored. Four hundred twenty-one adolescent males from New South Wales, Australia, who were currently competing in team sports indicated their usual responses to each of 8 acute stressors commonly experienced in sport, using a 128-item inventory. The reliability coefficient (Cronbach's alpha) for each stressor ranged from .81 to .92. Twenty-six of the original 128 items on the inventory were retained, on the basis of factor analysis. Correlations between stressors indicated that coping styles were a function of type of stressor, providing support for the transactional model. Goodness of fit was high (.87). The
present results partially support the construct of coping style among adolescent-aged sports competitors.\textsuperscript{15} 

**Buchanan and Seligman** (1997) have edited a book-length review of the topic. This concept goes a stage further than Weiner, stating that, in addition to the concepts of internality-externality and stability, a dimension of globality-specific is also needed. Abramson et al. therefore believed that how people explained successes and failures in their lives related to whether they attributed these to internal or external factors, to factors that were short-term or long-term and to factors that affected all situations in their situation. The topic of attribution theory, introduced to psychology by Fritz Heider, has had an influence on locus of control theory, but it is important to appreciate the differences between the histories of these two models in psychology. Attribution theorists have been, largely speaking, social psychologists, concerned. whereas locus of control theorists have been more concerned with individual differences. Significant to the history of both approaches were the contributions made by Bernard Weiner, in the 1970s. Prior to this time, attribution theorists and locus of control theorists had been largely concerned with divisions into external and internal loci of causality. Weiner added the dimension of stability-instability, and somewhat later, controllability, indicating how a cause could be perceived as having been internal to a person yet still beyond the person's control. The stability dimension added to the understanding of why people succeed or fail after such outcomes.\textsuperscript{16} 


Bombaci (1984) examined the relationship of LOC to the five hazardous attitudes, as indicated on the ipsative HAS, using a small sample of general aviation pilots. This study found that invulnerability was the predominant hazardous attitude among the general aviation pilots in the restricted sample (43%) followed by impulsivity (20%) and macho (14%). No participants fell into the remaining two categories. The investigators found that macho aviators were the most internal of all on the Rotter LOC scale ($M = 3.4; n = 5$), followed by invulnerability ($M = 8.1; n = 15$) and impulsivity ($M = 10.3, n = 7$). It is noteworthy that none of the means obtained for these three categories was in the direction that one could call external; only the impulsivity group scored close to the median (11.5) on the LOC scale. The extreme internality of the macho group is intriguing; unfortunately, the small sample size limits generalization. Nevertheless, mean scores for macho and Invulnerable, compared with those of the impulsive participants, seem consistent with much of what is known about LOC, in that (relative) externality has been found to be associated with impulsivity. Impulsivity as indicated on the HAS may not be the same as that measured by personality inventories. Lester and Bombaci (1984) found no significant relationship between the impulsivity dimension from the Old-HAS and the impulsivity scale of the 16 Personality Factor Questionnaire (16 PF, Cattell, Eber, & Tatsuoka, 1970), but did find that macho participants scored significantly higher than invulnerable on the integration/self concept control scale of the 16 PF. 17

Carden R et.al. (2004) selected 114 undergraduate completed the internal-external locus of control scale, the procrastination scale and the Achievement Anxiety Test. They also provided a self-report of their cumulative GPA. Students were divided into two groups

by a median-split of 10.5, yielding an internally oriented group of 57 and an externally oriented group of 57. The former students showed significantly lower academic procrastination, debilitating test anxiety, and reported higher academic achievement than the latter.\(^{18}\)

**Denny K G, and Steiner H.** (2009) reported that when under conditions of high demand and all static load, are happiness and satisfaction in four domains (family, friends, academics, recreation) influenced more by external or internal factors? Do student-athletes who lead exceedingly complicated lives report happiness as a function of athletic achievement or internal disposition? Stanford student-athletes (N=140) were studied with a standardized questionnaire which examined internal factors ((1) locus of control, (2) mindfulness, (3) self-restraint, and (4) self-esteem) to see whether they better account for happiness than external factors (playing time, scholarship). As predicted, internal factors were more powerful correlates of happiness when holding constant demographics. Regression models differed for different aspects of happiness, but the main postulated result of internal versus external was maintained throughout. These findings have implications for how well athletes cope with adversity which, in turn, could shed light on the development of traits that may provide a buffer against adversity and build resilien.\(^{19}\)

**Enger J M et.al (1994)** investigated the relationship between three factors internal/external locus of control, self-esteem, and parental verbal interaction for at risk Black male students in grades 6,7, and 8 who had been identified by their teachers as being


at risk completed the locus of control scale for children (Nowicki & Strickland, 1973) the Self-esteem inventory Questionnaire (Blake, 1991). A moderate positive relationship found between self-esteem and parental verbal interaction was consistent with a previous finding of no significant relationship for Blake elementary children. A weak, yet significant, negative relationship was found between locus of control and parental verbal interaction.²⁰

Frederick C M. (2000) found that a sample of college students and college athletes completed measures of competitiveness and locus of control. In addition, self-reports of GPA and sex were provided. Negative correlations among scores on competitiveness, GPA, and scores on internal locus of control were significant. Also, there were sex and athletic status differences in competitiveness. The Sports Rehabilitation Locus of Control (SRLC) scale was developed by Murphy GC, et.al. (1999) to facilitate study of the behavior of athletes recovering from injury. The SRLC was built specifically to assess locus of control in injured athletes by adapting selected items from the Multidimensional Health Locus of Control (MHLC) questionnaire developed by Wallston, Wallston, &DeVellis (1978), and in accordance with their rationale for the construction of domain-specific LOC scales. The resultant locus of control measures (internal, powerful others, and chance) were administered (along with the MHLC) to a sample of 45 sports-injured athletes. Good internal consistency (alphas ranged from .72 to .79) and test-retest reliability (correlations ranged from .75 to .85) was shown by the SRLC scales, and the pattern of inter-scale correlations supported the three-factor conceptualization of locus of control on which the SRLC was based. In the subsequent initial validation study, the relationship between SRLC scale scores and adherence to treatment was tested with a sample of injured

athletes. Encouragingly, internality was positively associated \( p<.05 \) with treatment adherence.\(^{21}\)

**Gary, D E. (1978)** examined the sex difference in the dimensions of Internal versus External controls using the J.B Rotters (1966) Locus of Control Scale on male female college students. The findings contrast with others, that sex difference for factor structure was observed. The confounding effects of the I-E scale was brought into focus by viewing causality from 4 elements frame work, as suggested by attribution theorists, as opposed to the 2 element causal model assumed by Rotter.\(^{22}\)

**Gerend** (2004). In the health field, older women with an internal locus of health control view particular health threats as more controllable or preventable. The resulting behavior was a lower perception of general susceptibility to disease. In the same study women with an external locus of control believed themselves to have a higher susceptibility to particular diseases because they viewed health risks as less preventable and controllable (Gerend, et al.). With depressed patients (Alloy & Abramson, 1979) there was less likelihood to assume an illusion of control in the absence of a contingency between behavior and a desired outcome than the non-depressed patients.\(^{23}\)

**Gerbert & Kemmler (1986)** seems to support this notion. They asked a sample of German pilots how they had managed to escape from hazardous situations they had


encountered. Half attributed their success to luck, and 30% to the application of proper procedures. In short, there may be a weakness in the current and past research on LOC among aviators, in that participants in the research have been overwhelmingly general and commercial aviation pilots operating in peacetime environments. Perhaps they are more “in control” because they can rely on their training and skills, and not worry about hostile fire.²⁴

**Hauri, A B. (1991)** Investigated psychological and motivational factors that predict successful performance. This study used a probit analysis to determine the predictors of successful completion of 285 riders. The strongest predictor of successful completion was distance ridden during the training period. The second strongest predictor was Internal Locus Of Control as measured by Rotter’s I-E scale. The third predictor was whether or not the individual had established completion as a personal goal, or number of times of person had ridden per week during training did not predict successful completion.²⁵

**Hunter (2002),** in his efforts to develop and concurrently validate the ASLOC scale, 36 found a significant, negative correlation between internality and self-reported involvement in hazardous events, as indicated by the Hazardous Events Scale (HES; Hunter, 1995). He defined a hazardous event as an accident or an incident which could have easily become an accident. One must note that the HES is a subjective measure, and, drawing upon other

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safety-related LOC research (e.g., Arthur, Barrett, & Alexander, 1991), a much less sensitive criterion than archival records of accidents. Nonetheless, Hunter’s finding is of potential interest to the aviation safety community, in that it indicates that internal LOC may be a predictor of vigilance and avoidance of unreasonable risks. Since LOC is not conceptualized as a stable personality construct but as a set of expectancies about control over the environment, then these findings may also imply that the attitudes underlying the potential for hazardous behavior can be changed. Of course, an alternative explanation to Hunter’s results could be differences in self-disclosure between internals and externals.\textsuperscript{26}

Karasek (1979) has defined "job strain" as work in jobs with high psychological demands and low control. In more than a dozen epidemiological studies over the last decade, occupational stress researchers have implicated job strain as a risk factor for heart disease (Schnall et al., 1994). Although the mechanism by which the stress of job strain influences development of CHD is unknown, previous findings suggest that job strain may be related to elevations of blood pressure at work (Schnall et al., 1990, Van Egeren, 1992). High blood pressure has long been known to be a marker for individuals at high risk for developing CHD, and therefore is one possible mechanism by which job strain might exert its deterious influences on the heart. One basic question yet to be answered by the job strain model "relates to the issue of objective versus subjective control. Clearly, the job strain model

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\textsuperscript{26} Hunter, D. R. (2002). Development of an aviation safety locus of control scale. \textit{Aviation, Space, and Environmental Medicine}, 73, 1184-1188. 23
considers control as an objective characteristic of the work situation. However, cognitive and affective responses of the workers to these characteristics vary considerably according to their individual patterns of appraisal and coping (Lazarus and Folkman, 1984). Generalized control beliefs have been found to moderate the effects of objective job conditions on well-being (Spector, 1987). Furthermore, through regression analysis, Hendrix (1989) found locus of control to be a statistically significant predictor of job stress (Beta=.39; p<.001). These findings (as well as findings where individual coping characteristics such as Type A behavior, hostility, or lack of hardiness were associated with increased ischemic heart disease) call for a conceptual clarification of the relationship between control-limiting job conditions and those personal characteristics (particularly locus of control) which influence the perception of control (Siegrist et al., 1990). One possible relationship is interaction between job conditions and personality characteristics. For example, Parkes (1991) found a significant three-way interaction between job demands, job decision latitude, and Paulhus' locus of control scale, in predicting affective distress and anxiety. For externals, demands and latitude combined intractively to predict outcome (consistent with Karasek's model), whereas for internals, additive findings (main effects for demands and latitude) were obtained.27

Losier G F, & Vallerand R J. (1994) considered a determinant of motivation, little research has actually studied the relation between the two constructs on a longitudinal basis and in natural settings. This was the purpose of the present study. Canadian male

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adolescent hockey players (N = 64) in their first year at an elite level completed a questionnaire 2 weeks into the hockey season (T1) and at the end of the regular season (T2), assessing perceived competence and self-determined motivation at both times. The results partially support the hypothesis that, over time, perceived competence determines motivation (rather than the reverse) but do not exclude the possibility that, with time, motivation may also influence perceptions of competence.28

Morris, (1993) The main idea of social learning theory remains the same that there is always an interaction among three factors, that being the person, the situation and the evaluation expectancies obtained by that person from that person expriences.29

Madden C C, & Kirkby R J. (1995) investigated in a sample of 84 men and 49 women recruited from players engaged in regular, organized, competitive grade basketball. Subjects were administered the Stressful Situations in Basketball Questionnaire which provides measures on 5 types of stress in competitive basketball. Analyses of gender differences showed that men reported more stress than female players on the "Team performance" scale. Research is required to evaluate whether this difference is due to a perception of women that they have less influence over the performance of the team or whether it is due to men having a higher stake in the results of competition.30


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response sets. Fifty-nine patients with chronic low back pain were given Rooters internal-external (I-e) scale and the MMPI. Multiple regression analysis showed that the MMPI K, F, and Pt scales produced the most efficient prediction of L-E scores. Response set tendencies to dramatize problems and traits that involve excessive rumination and self-doubt were related to external locus of control.\(^{31}\)

**Molinari V, & Khanna P. (1981)** proposed that the low-order-correlations reported in the literature between externality and two indices of pathology would be heightened if the externality construct was differentiated into defensive and congruent externality. Defensive externals, which have low expectations of successes in achieving valued goals and adopt external beliefs as a defense against feelings of personal failure, should be prone to anxiety; congruent externals, with their sincere belief that reinforcement is not contingent upon their own behavior, fit into the “learned helplessness” paradigm and should become depressed. Sixty male and female college undergraduate were selected as internal, Defensive external and congruent external subjects on the basis of their scores on Levenson internal, powerful others, and Chance scales, and administered the self rating depression scale and the Achievement Anxiety Test. Results of the study are equivocal. Congruent externality does manifest a significant positive correlation with depression. But this correlation is low. Defensive externality is significantly positively correlated with debilitating anxiety, but the correlation is greater for congruent externality. Internality is significantly negatively correlated with both depression and debilitating anxiety.\(^{32}\)


McKelvie S J, & Husband D E. (1980) Selected 92 athletes (members of university and college teams) and 93 non-athletes (a representative sample of the university population) completed the Illinois Competition Questionnaire measuring trait anxiety in competitive sports situations and the Rotter I-E scale measuring locus of control. No differences between the groups were found on either test, and scores on the tests did not correlate for either group. Further research on sports participation, locus of control, and anxiety is suggested.33

Olsson C J, et.al. (2008) examine whether the use of internal imagery would affect high jumping performance for active high jumping athletes. Over a period of six weeks, a group of active high jumpers were trained with an internal imagery program for a total of 72 minutes. This group was compared to a control group consisting of active high jumpers that only maintained their regular work-outs during the same time period. Four variables were measured; jumping height, number of failed attempts, take-off angle, and bar clearance. There was a significant improvement on bar clearance for the group that trained imagery (p < 0.05) but not for the control group. No other differences were found. The results suggest that internal imagery training may be used to improve a component of a complex motor skill. Possible explanations and future recommendations are discussed.34

Parkes K R. (1984) suggested that internals and externals differ in the nature and effectiveness of their coping behavior. This study investigated locus of control and coping processes in relation to specific stressful episodes reported by 171 female student nurses.

34 Olsson CJ, et.al. (2008), « Internal imagery training in active high jumpers.»,Scand Journal of Psychology. 2008 Apr;49(2):133-40
Scores on each of three measures (General coping, direct coping and Suppression) that were derived from the “Ways of coping” Questionnaires were analyzed to examine the role of appraisal (in terms of the extent to which the situation was perceived as amenable to control) and the perceived importance of the episode as mediators of the relation between locus of control and coping. The results showed significant interactions between locus of control and appraisal for each of the measures. Further examination of the interactions showed that the patterns of coping reported by internals were potentially more adaptive in relation to types of appraisal than those of externals. The perceived importance of the episode was significantly related, negatively, to suppression, but the interaction with locus of control was not significant.35

Powell et al., (1987) Exercise is widely recommended for health promotion and primary-risk reduction in people who have not developed symptoms of cardiovascular illness (Ewart, 1995). However, relatively few people engage in regular exercise for a period of time to secure the benefits of moderate exercise to physical health (Duppert, 1992). The attrition rate for both clinical and community-based exercise programs can be as high as 50% within the first 3 to 6 months of participation (Brawley & Rogers, 1993; Dishman, 1988). 36

Pittman N L, & Pittman T S. (1979) based on Wortman and Brehms integration of reactance theory with Seligman’s model of learned helplessness, an investigation was conducted to examine the effects of amount of helplessness training and internal-external

locus of control on subsequent task performance and on self-ratings of mood. Subjects were divided into “internal” and “external” groups and were then given high, low, or no helplessness training on a series of concept-formation problems. After completing a mood checklist, all subjects worked on an anagram task presented as a second experiment by a second experimenter. The results revealed that internals exhibited greater performance decrements and reported greater depression under high helplessness than did externals. In the low helplessness conditions, internals tended to perform better than controls subjects, while externals tended to perform worse than controls subjects; low helplessness subjects also reported the highest levels of hostility. The results are discussed within the context of Wortman and Brahms of reactance and learned helplessness theories.37

Rudski (2001) placed undergraduate students in a competitive environment to measure superstition and illusion of control. When students were placed in a winning condition in a competitive environment they did increase their superstitious belief. Rudski also found a link supporting self-efficacy and increased use of superstition. Participation in athletics was not found to be a factor in superstitious beliefs. In another study, Rudski, Lischner, and Albert (1999) evaluated superstitious rules created by participants when solving a task without instructions and the relationship with locus of control. Locus of control showed no relationship with superstitious rule generation. This supports the findings of Tennen and Sharp (1983) which also suggested that locus of control does not affect illusion of control in a given situation.38


Rotter, J. B. (1966, 1982; Rotter & Hochreich, 1975). According to SLT, the likelihood of a given behavior occurring, i.e., the behavior potential, varies according to (a) the expectancy that a particular reinforcement will occur as a result of the behavior, (b) the value of the expected reinforcement, and (c) the psychological situation, i.e., the components of a given situation, including meaning attached by the individual to various components of the situation (Rotter, 1982). For example, whether an individual decides to study for a particular exam depends on the expectancy that studying will result in a desired reinforcement, such as receiving an A, the value to the student of receiving an A, and the meanings attached to the situation (e.g., whether one’s social group is also studying for the exam). Within this theory, reinforcement is “any action, condition, or event which affects the individual’s movement toward a goal” (p.94; Rotter, 1982). According to SLT, positive reinforcement refers to any consequence that increases the likelihood that a behavior will occur (Rotter, 1982).

Sonstroem & Walker (1973) studied locus of control and attitudes toward physical fitness and found that internals had more favorable attitudes towards physical activity, obtained significantly better fitness scores, and engaged in greater amounts of voluntary physical exercise than did externals (Carlise-Frank, 1991). It must be recognized, however, that these authors used a theoretical and methodological approach that supported a generalized expectancy for control beliefs. Validity of studies investigating the relationship between locus of control and health-related behaviors have been questioned due to the fact that an individual may have a tendency towards internality in many life areas, but have an external belief with regard to the particular health-related behavior in question.

Schultz (2005) point out, significant differences in locus of control have not been found for adults in a U.S. population. However, these authors also note that there may be specific sex-based differences for specific categories of item to assess locus of control—for example, they cite evidence that men may have a greater internal locus for questions related to academic achievement (Strickland & Haley, 1980; cited in Schultz & Schultz, 2005). The question of whether people from different cultures vary in locus of control has long been of interest to social psychologists. Japanese people tend to be more external in locus of control orientation than people in the U.S., whereas differences in locus of control between different countries within Europe, and between the U.S. and Europe, tend to be small (Berry, Poortinga, Segall&Dasen, 1992). As Berry et al. (1992) point out, different ethnic groups within the United States have been compared on locus of control, with blacks in the U.S. being more external than whites, even when socio-economic status is controlled (Dyal, 1984; cited in Berry et al., 1992). Berry et al. (1992) also point out how research on other ethnic minorities in the U.S., such as Hispanics, has been ambiguous. More on cross-cultural variations in locus of control can be found in Shiraev and Levy (2004). The research in this area indicates how locus of control has been a useful concept for researchers in cross-cultural psychology.41

Sauders, M. G et al (1976) used the internal —external locus of control in performance on a vigilance task. Previous studies have demonstrated that there are large individual ability in


subject’s ability to perform on vigilance tasks. The present study used Rotter’s (1-E) control
scale to resolve some of the variable attributed to individual difference and to test the
hypothesis that the internals are better monitors on vigilance tasks than externals. The
students performed a visual and watch keeping task for 1 hour. External subjects made
significantly more signals while doing the entire task.42

Werrell (2005), provides historical, anecdotal examples of overconfidence and its
dangerous ramifications among U.S. Air Force pilots during the postwar transition from
propeller-driven to jet-powered aircraft. Werrell notes that during this time period (1946-
1953), the Air Force seemed to accept accidents as part of the cost of flying. He attributes
part of this attitude to jet pilots who had survived combat in World War II. These pilots
manifested attitudes can best be characterized as a combination of machismo and
invulnerability, believing that if the enemy had failed to get them, then nothing else would,
especially in peacetime. Added to this was the belief that “real” fighter pilots should not
carry checklists and that preflight checks should be kept to a minimum. The author believes
that many accidents that occurred during this period were due to a need on the part of pilots
to prove their manhood, plus the belief that they were “bulletproof.” Werrell cites a concrete
example of a veteran pilot who, eager to check out in the F-86, conceals the fact that he has
had no time in the aircraft. He asked for minimal assistance on the flightline, used no
checklist, and soon afterward survived a crash caused by his unfamiliarity with the aircraft’s
fuel system. A person can believe that repeated success is due to good luck rather than

performance on a vigilance task. Perceptual and Motor Skills, 42, 939-943.
effort. This may be a more realistic expectancy in hazardous situations such as war. Perhaps the stresses of war, in which chance does play a role in one’s survival, create situational pressures that move a person’s expectancies toward externality. (The early research of Phares [1957] showed that persons with external control orientations are more prone to the gambler’s fallacy). Given the power of the situation, and the fact that in time of war pilots oftentimes fly a set number of missions before going home, it would be reasonable to expect even the most internally-controlled individual to be prone to the gambler’s fallacy, especially toward the end of one’s tour of duty. Anecdotal evidence abounds about pilots in combat becoming superstitious about their last mission. We can envision the aviator who has got out of tight situations in the past and has attributed this success to luck.43

**Zahariadis P, et.al. (2006)** tested utility of self-determination and sport commitment theories to understanding young athletes' sport commitment. 343 young athletes (M = 13.5 yr., SD = +/- 1.1) from soccer, basketball, volleyball, handball, and water polo teams Volunteered to participate. All completed the Sport Motivation Scale and the Sport Commitment Questionnaire. Pearson correlations showed a strong relationship between commitment and intrinsic motivation scores. In contrast, extrinsic motivation scores were not significantly correlated to commitment, whereas a motivation scores showed a negative correlation to commitment. Path analysis resulted in strong positive association of intrinsic motivation and commitment. A motivation had small negative relation to commitment. According to the model tested, social constraints and involvement opportunities were not

significant contributors to sport commitment. An alternative model supported the mediating role of enjoyment to psychological commitment. The results showed that high self-determination is supportive of sport commitment, whereas low self-determination reduces sport commitment.44

2.2 Related literature on Interpersonal relationship

Axelrod (1997), large number of subjects often displays a high degree of coordinated behaviour that serves to regulate conflict. When this coordinated behaviour takes place without the intervention of a central authority to regulate the behaviour, we tend to attribute the coordinated behaviour and the resulting regulation of conflict to existence of norms. What are the norms on a rugby game? The answer to this question will help us to set the behavioural local rules to be applied on the agent-based model. By definition *a norm exist in a given social setting to the extent that individuals usually act in a certain way and are often punished when seen not to be acting in this way* (Axelrod, 1997, p. 47). Axelrod (1997) sustain that according with this behavioural definition the extent to which a certain action is a norm depends on just how often the action is taken and just how often someone is punished for not taking it. To explain norms Axelrod suggest the evolutionary approach (Axelrod, 1997). This approach assume that players used individual strategies with each other to achieve a recompense based upon their decision and the decisions of the others, in other words the players observe and act through each other actions to make is own decisions and actions. There is no need to assume that the subject is rational and understands the full strategic implications of the situation. The most effective individuals (i.e. high level of payoffs) are more likely to be chosen or remain in the team.45

Baker J, et.al. (2000) identified the relationship between athlete sport anxiety and various sport outcomes (e.g., performance and dropout). For the majority of athletes involved in sport, the coach is an influential element of the competitive experience. Two hundred and

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twenty-eight athletes from 15 sports, completed the Sport Anxiety Scale (SAS) and the Coaching Behavior Scale for Sport (CBS-S). The predictive ability of athletes' perceived frequency of seven coaching behaviours (physical training, mental preparation, goal setting, technical skills, competition strategies, personal rapport and negative personal rapport) on four forms of sport anxiety (total anxiety, somatic anxiety, concentration disruption and worry) was examined. Results indicate that negative personal rapport was a significant predictor of all measured forms of sport anxiety while competition strategies was a significant predictor for total anxiety, concentration disruption, and worry. Other behaviours were not significant. The findings suggest that negative rapport between coach and athlete is an important contributor to athlete anxiety. In addition, behaviours that the coach demonstrates relative to competition can be influential in reducing athlete anxiety.46

Carron and Hausenble (1998) a group is defined as, A collection of two or more individuals who possess a common identity, have common goals and objectives, share a common fate, exhibit structured patterns of interaction and modes of communication, hold common perceptions about group structured, are personally and instrumentally interdependent, reciprocate interpersonal attraction, and consider themselves to be a group. (pp. 13-14) Based on this definition, even teams that do not play “team sports” (e.g., Track and Field, Cross Country, Wrestling) would be considered a group or team. Ludwig Von Berelanffy’s (1952) systems theory also defines a group in a way that would individual sports teams. A “system is a structure of an organized set of interrelated and interacting parts

that maintain their own balance amid the influences of the environment” (Henman 2003, p. 3). The individuals work as one but they need each other to win as a team, so they are interrelated. They work together at practices and come together during competition to win as a team even if they are doing the events as an individual. This means that they are interacting as a group or a team even though they are working alone. The information stated above shows that even individuals sports still function like teams. Even though these teams function the same way in individual the athletes do not rely on their teammates to compete, which could make communication satisfaction less important. What is being looked at is if communication satisfaction is still as important with these types of teams. There have been no studies on communication that compare individual and team sports, so there is no information about the topic that can be looked at before this study.47

Chow G M, & Feltz D L. (2008) examined the influence of collective efficacy and subjective interpretations of success/failure on team causal attributions. The participants were 71 male and female high school athletes on 20 track relay teams. Before a selected competition, participants completed a collective efficacy questionnaire. Then, immediately after their race, they were administered a modified version of the revised Causal Dimension Scale-II. A multi-level framework was employed to assess collective efficacy as an individually held perception and as a shared team belief. The individual perceptions of team success/failure significantly predicted the locus of causality and stability dimensions, whereas aggregated collective efficacy emerged as a significant team level predictor of average stability. Individual perceptions of collective efficacy were significantly related to

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team control and this relationship was moderated by the sex of the team. The findings indicate that collective efficacy beliefs held by athletes and teams prior to a competition influence the formation of post-competition team attributions in sport.48

Clore & Worche1 (1966) suggested people with similar economic status are likely to be attracted to each other. Buss & Barnes (1986) also found that people prefer their romantic partners to be similar in certain demographic characteristics, including religious background, political orientation and socio-economic status.49

Cratty & Hainin,( 1980) have found that negative conflict can cause athletes to be unsatisfied with their teammates. A study by Cratty and Hanin (1980) done during a volleyball game showed the impact of negative conflict on a team. The superior of the two teams was having a hard time “getting going “and the researchers suggested it was because during this game 66 percent of comments were negative. As the team’s play worsened, more and more of the comments became negative. This was explained as a chain of events where poor play leads to negative comments, which leads to even poorer play by the team and the superior team eventually lost (Cratty & Hanin 1980). This is an example of a communication factor affecting team’s physical ability. The explanation for the superior team losing was negative comments, which could lead to a team member being unsatisfied with the team’s The study stated early by Campbell and Jones (2002) found that the best predictor of an athlete’s stress or satisfaction with their team is group interaction and communication. This study also found that inappropriate behaviour by

Other teammates caused stress in players. Another example of a stress causer was a “players’ perceptions of their own behaviour upsetting other team members,” (p.91). Another important part of the study was that it was not only on court issues that caused the athletes stress within their team. Off court issues such as rooming assignments (this was an example the authors gave) also caused stress and dissatisfaction among athletes. Communication. Another important aspect of interpersonal communication is the athlete’s perception. Cratty and Hanin (1980) describe three variables that contribute to an athlete’s interpersonal perception of their teammates: 1) the degree they feel their teammate is helpful to their own personal success, 2) “off-the-field” contacts, this has to do with similarities they have other than the team they play on together, 3) the degree to which they found their teammate to be a threats to their personal esteem. 50

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Based on this definition, even teams that do not play “team sports” (e.g. Track and Field, Cross Country, Wrestling) would be considered a group or team. Ludwig VonBrelanffy’s (1952) systems theory also defines a group in a way that would individual sports teams. A “system is a structure of an organized set of interrelated and interacting parts that maintain their own balance amid the influences

of the environment” (Henman 2003, p. 3). The individuals work as one but they need each other to win as a team, so they are interrelated. They work together at practices and come together during competition to win as a team even if they are doing the events as an individual. This means that they are interacting as a group or a team even though they are working alone. Athletic teams and organizational teams have many similarities. Both are Working together to accomplish a common goal, both have to overcome obstacles to meet these goals and both have people above them they must answer to (coaches, bosses and managers). According to the studies that were looked at for this section, organizational teams are more productive when they are satisfied with the communication between both their teammates and their bosses or managers. So, if organizational teams and athletic teams function the same way there is reason to believe that if athletes are satisfied with communication on their team it should also make their team more successful.51

Dane S, & Sekertekin M A. (2005) reported that handedness and differences in interpersonal relations and aggressiveness were studied in 33 right-handed (M age=22.9 yr., SD=4.9) and 18 left-handed (M age=22.5 yr., SD=2.4) male soccer players who played actively in professional soccer leagues of Turkey. Hand preference on the Edinburgh Handedness Inventory and scores for destructiveness, assertiveness, and passive aggressiveness on a Turkish Aggressiveness Inventory, plus scores for sociability, benevolence, tenderheartedness, tolerance, and insistence on the Turkish Interpersonal Relations Inventory were examined. Mean destructive aggressiveness was higher for the

left- than the right-handed athletes. Means on tolerance and insistence were higher for the right- than the left-handed athletes. Higher aggressiveness and less tolerance and insistence in the left-handers may be associated with their higher sports performance.  

**Drummond J L**, et.al. (2008) explored athletes' perceptions related to coaching and athletic training care, the Coaching and Athletic Training Questionnaire was developed. A 10-item version was administered to 708 varsity athletes from three Division I universities in the National Collegiate Athletic Association. 341 women and 344 men completed questionnaires. Data from half of the sample of 685 were used for an exploratory factor analysis using principal components analysis with oblique rotation and the second half for a confirmatory factor analysis. Analyses yielded three interpretable factors, accounting for 68% of the variance, which were labeled Comfort with Athletic Trainer or Coach, Sex Influence on Quality of Care, and Athletic Trainer Preference. Multivariate analysis of variance indicated that factor scores of women and men differed significantly, and at followup women and men differed significantly on Comfort with Athletic Trainer or Coach, but the small effect size minimizes its meaningfulness. No significant difference was noted for the other two factors. It appears coaches should be sensitive and available in case of injury or other need. Athletes' perceived quality of care by athletic trainers does not appear related to sex of athlete or trainer.  

**Gage E A.** (2008) examined the impact of participating in different sports on male athletes' gender attitudes, hegemonic masculinity, sexual behavior, and sexual aggression.

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Research that compares athletes with nonathletic, this research finds differences between collegiate athletes and men who do not participate in collegiate sports, as well as between men who play different collegiate sports. Athletes in center sports (such as football) scored significantly higher on hyper-masculinity scales, had lower attitudes toward women, and displayed more sexual aggression and more sexual activity than men who competed in marginal sports (e.g., track and field) or not at all.54

Jackson B, (2007) examined the interrelationships among three forms of relational efficacy within performing dyads, namely, self-efficacy, other-efficacy, and relation-inferred self-efficacy. The second objective was to examine the relationships between these efficacy beliefs and athletes' perceptions of their commitment to and satisfaction with their current partnership. Participants were 120 junior tennis players (age, M = 14.30 years, SD = 1.21) performing within 60 intact pairs (i.e., doubles). Results revealed that self-efficacy and other-efficacy were predictive of athlete commitment and satisfaction, respectively. In addition, by utilizing actor-partner interdependence models, partner as well as actor effects were evident. The findings illustrate that relational efficacy beliefs may not only have implications for the individual holding such beliefs, but also for his or her relational partner. Implications for the future study of efficacy beliefs within dyadic contexts are discussed.55

Jones, Wells, Peters, & Johnson, (1988). In the book “Guide to Effective Coaching,” there are several lists (different levels of coaches) of qualities good coaches should have and

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54 Gage EA. (2008), “Gender attitudes and sexual behaviors: comparing center and marginal athletes and nonathletes in a collegiate setting.”, Violence Against Women, Sep;14(9):1014-32
communication skills shows up on each one of those lists. Just like between teammates, interpersonal communication is also important between coaches and athletes. There are many theories that can explain this; one is the theory of predicted outcome value (POV; Sunnafrank, 1986). According to Sunnafrank’s (1988) the predicted outcome value is positively associated with the amount of verbal communication, nonverbal expressions, initiation level of liking, attitude similarities and background similarities. If an athlete sees that they can value from the coach then they will work for them. If the athlete does not feel they can gain any value from the coach then they will not work for them.  

**Jowett S, & Ntoumanis N.** (2004) developed and validate a self-report instrument that measures the nature of the coach-athlete relationship. Jowett et al.’s (Jowett & Meek, 2000; Jowett, in press) qualitative case studies and relevant literature were used to generate items for an instrument that measures affective, cognitive, and behavioral aspects of the coach-athlete relationship. Two studies were carried out in an attempt to assess content, predictive, and construct validity, as well as internal consistency, of the Coach-Athlete Relationship Questionnaire (CART-Q), using two independent British samples. Principal component analysis and confirmatory factor analysis were used to reduce the number of items, identify principal components, and confirm the latent structure of the CART-Q. Results supported the multidimensional nature of the coach-athlete relationship. The latent structure of the CART-Q was underlined by the latent variables of coaches' and athletes' Closeness (emotions), Commitment (cognitions), and Complementarily (behaviors).  

Kurdek & Schnopp-Wyatt, (1997). Similarity has effects on starting a relationship by initial attraction to know each other. It is showed that high attitude similarity resulted in a significant increase in initial attraction to the target person and high attitude dissimilarity resulted in a decrease of initial attraction (Gutkin, Gridley & Wendt, 1976; Kaplan & Olczak, 1971). Similarity also promotes relationship commitment. Study on heterosexual dating couples found that similarity in intrinsic values of the couple was linked to relationship commitment and stability.58

Klohnenn& Mendelsohn, (1998). Principles of similarity and complementarity seem to be contradictory on the surface (Posavac, 1971; In fact, they agree on the dimension of warmth. Both principles state that friendly people would prefer friendly partners. (Dryer & Horowitz, 1997). The importance of similarity and complementarity may depend on the stage of the relationship. Similarity seems to carry considerable weight in initial attraction, while complementarity assumes importance as the relationship develops over time (Vinacke, Shannon, Palazzo, Balsavage, et-al, 1988). Markey (2007) found that people would be more satisfied with their relationship if their partners differed from them, at least, in terms of dominance, as two dominant persons may experience conflicts while two submissive individuals may have frustration as neither member take the initiative. Perception and actual behavior might not be congruent with each other. There were cases that dominant people perceived their partners to be similarly dominant, yet in the eyes of independent observers, the actual behavior of their partner was submissive, in other words, complementary to them.

(Dryer 1997). Why do people perceive their romantic partners to be similar to them despite evidence to the contrary? The reason remains unclear, pending further research.59

Kjørmo O, & Halvari H. (2002) studied the relationship of burnout with environmental and personal characteristics such as lack of time for being with significant others outside sport, cohesion in training groups, role conflict, and self-confidence among 136 elite athletes. Analysis indicated that the mean Burnout scores were in the low range. Cohesion in training groups and Self-confidence were negatively associated with Burnout, whereas Lack of time to be with significant others and Role conflict were positively associated with Burnout scores. Results are in accordance with Coakley's 1992 conception of burnout explained as a social problem, Kahn's 1978 hypothesis that role conflict is positively correlated with stress and burnout, and Smith's 1986 hypothesis that personality factors such as self-confidence should be associated with cognitive appraisal of situational demands related to burnout.60

Lydon, Jamieson & Zanna, (1988), Interpersonal similarity and attraction are multidimensional constructs in which people are attracted to others who are similar to them in demographics, physical appearance, attitudes, interpersonal style, social and cultural background, personality, interests and activities preferences, and communication and social skills. A study conducted by Theodore Newcomb (1961) on college dorm roommates suggested that individuals with shared backgrounds, academic achievements, attitudes,


values, and political views typically became friends. Physical appearance the matching hypothesis proposed by sociologist Erving Goffman suggests that people are more likely to form long standing relationships with those who are equally matched in social attributes, like physical attractiveness, as they are. The study by researchers Walster and Walster supported the matching hypothesis by showing that partners who were similar in terms of physical attractiveness expressed the most liking for each other. Another study also found evidence that supported the matching hypothesis: photos of dating and engaged couples were rated in terms of attractiveness, and a definite tendency was found for couples of similar attractiveness to date or engage. Several studies support this evidence of similar facial attractiveness. Penton-Voak, Perrett, and Peirce (1999) found that subjects rated the pictures with their own face morphed into it as more attractive. DeBruine (2002) demonstrated in her research how subjects entrusted more money to their opponents in a game play, when the opponents were presented as similar to them. Little, Burt, & Perrett (2006) examined similarity in sight for married couples and found that the couples were assessed at the same age and level of attractiveness.61

Lafrenière M A, et.al. (2008) reported that Vallerand et al. (2003) developed a dualistic model of passion, wherein two types of passion are proposed: harmonious (HP) and obsessive (OP) passion that predict adaptive and less adaptive interpersonal outcomes, respectively. In the present research, we were interested in understanding the role of passion in the quality of coach-athlete relationships. Results of Study 1, conducted with athletes (N=157), revealed that HP positively predicts a high-quality coach-athlete relationship.

whereas OP was largely unrelated to such relationships. Study 2 was conducted with coaches (N=106) and showed that only HP positively predicted the quality of the coach-athlete relationship. Furthermore, these effects were fully mediated by positive emotions. Finally, the quality of the coach-athlete relationship positively predicted coaches' subjective well-being. Future research directions are discussed in light of the dualistic model of passion.62

**Miller** (2003) synchronized teamwork is the main way in which decisions are made, strategies are developed and performance is measured within organizations. Miller also states that the synchronized teamwork should be supported a healthy communication environment.63

**Markey** (2007) found that people would be more satisfied with their relationship if their partners differed from them, at least, in terms of dominance, as two dominant persons may experience conflicts while two submissive individuals may have frustration as neither member take the initiative. Perception and actual behavior might not be congruent with each other. There were cases that dominant people perceived their partners to be similarly dominant, yet in the eyes of independent observers, the actual behavior of their partner was submissive, in other words, complementary to them (Dryer 1997). Why do people perceive their romantic partners to be similar to them despite evidence to the contrary? The reason remains unclear, pending further research.64

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Mathes & Moore (1985) found that people were more attracted to peers approximating to their ideal self than to those who did not. Specifically, low self-esteem individuals appeared more likely to desire a complementary relationship than high self-esteem people. We are attracted to people who complement to us because this allows us to maintain our preferred style of behavior (Markey & Markey (2007), and through interaction with someone who complements our own behavior, we are likely to have a sense of self-validation and security (Carson, 1969).

Patsiaouras A. (2008) examined the effect of person-centered intervention on motivation for athletic performance. 74 volleyball players, 24 boys and 50 girls (M age = 13 yr., SD = 1.0), completed a motivation questionnaire, the Leistungs Motivations Test fürJugendlichen prior to and after an 8-mo. group treatment that included the application of Roger's person-centered method to the participants of the experimental group (1 boys' team n = 12; 1 girls' team n = 11), at a frequency of at least one session per week. In the control group (1 boys' team n = 12; 3 girls' teams n = 39), no particular method was used apart from the pedagogical methods that coaches selected. Results revealed a statistically significant decrease in boys' scores on desire for performance and success between the pre- and posttest measurements. No significant change in girls' scores was observed. Thus, the 8-mo. treatment using the person-centered method did not improve volleyball players' motivation for performance.

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Pincus, Knipp and Rayfield (1990) found that there is a positive link between employees’ views of communication with both immediate supervisors and top managers and satisfaction at work. The same study also found a link between employees’ “ability to participate in the organizational decision-making process” and their satisfaction at work (p. 183). The connection between employee and immediate supervisor and top manager can be compared to athletic and the relationship between coaches and athletes.67

Sullivan & Feltz, (2003). A study that was done on effective communication in team sports found that effective team communication is a four-factor construct. The four factors are acceptance, distinctiveness, positive conflict and negative conflict. Acceptance is “communication of consideration and appreciation between teammates” (p. 1709). This was largely shown to occur though support of teammates. Distinctiveness is “communication of a shared, but unique indemnity” (p. 1710) Positive conflict is a Communication Satisfaction and Team Success 4 disruption that is dealt with in a constructive and integrative way (p. 1710). Negative conflict is dealt with in a way that is emotional, personal and confrontational (p. 1710).68

Smith A, (2007) reported that grounded in self-determination theory (Deci & Ryan, 1985) and the self-concordance model (Sheldon & Elliot, 1999), this study examined the motivational processes underlying goal striving in sport as well as the role of perceived coach autonomy support in the goal process. Structural equation modeling with a sample of 210 British athletes showed that autonomous goal motives positively predicted effort, which,

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in turn, predicted goal attainment. Goal attainment was positively linked to need satisfaction, which, in turn, predicted psychological well-being. Effort and need satisfaction were found to mediate the associations between autonomous motives and goal attainment and between attainment and well-being, respectively. Controlled motives negatively predicted well-being, and coach autonomy support positively predicted both autonomous motives and need satisfaction. Associations of autonomous motives with effort were not reducible to goal difficulty, goal specificity, or goal efficacy. These findings support the self-concordance model as a framework for further research on goal setting in sport.69

Smith A L, (2006) aimed of this study were twofold: (a) to determine if dispositional achievement goal orientation profiles that are reported in the literature would be observed in a sample of youth athletes, and (b) to examine potential achievement goal orientation profile differences on perceptions of the motivational climate, perceptions of peer relationships, and motivation-related responses. Male soccer players (n=223) aged 9-12 years (mean=10.9, s=0.6) completed a multi-section questionnaire containing assessments of dispositional goal (task, ego) orientations, the perceived task- and ego-involving features of the motivational climate, perceived peer acceptance and friendship quality (positive friendship quality, conflict), perceived ability, soccer enjoyment, and satisfaction with one's performance and the team. Four profiles were observed that closely matched those observed by Hodge and Petlichkoff (2000), though in the present study a lower proportion of participants exhibited achievement goal profiles consisting of relatively high ego orientation. Achievement goal profile differences were found for all variables except positive friendship quality, with a

general trend for those reporting relatively lower task goal orientation to exhibit less adaptive responses. Overall, the findings support achievement goal frameworks (e.g. Nicholls, 1989) and suggest that further examination of dispositional achievement goals may afford a deeper understanding of social relationships and motivational processes in youth sport.  

**Wheeless and Howard** (1984) “job satisfaction is generally defined of as one’s affective response to various facets of the work environment,” (p. 222). This would mean that people should be satisfied at work if there is a healthy communication environment. There have also been many different studies done that connections communication, job satisfaction and organization success. In project teams, it has been found that low and high communication frequency corresponds to lower levels of performance by the team and when there is moderate communication frequency there is higher team performance (Patrashkove – Volzdoska, McComb, Green, & Compton, 2003). This shows that teams must find just the right amount of communication that works for them. It also proves that just because there is a lot of communication it does not mean that the members of the team will be satisfied with the communication.  

2.3 SUMMARY OF RELATED LITERATURE  
The investigator reviews related literature on locus of control and interpersonal relationships of sports man. Based on the experience gained, the investigator formulated suitable methodology to be adapted in this study.

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