COPING STRATEGIES USED BY

INDONESIAN ELITE BADMINTON PLAYERS

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Abstract

The main purpose of this study was to identify strategies used by Indonesian elite badminton players to cope with stressful situations they had experienced as elite athletes. Participants were 16 current Indonesian elite badminton players who had experienced playing in the Olympic Games. Each participant was interviewed using an in-depth, open-ended interview technique that inquired about stressors experienced, ways of coping, and their effectiveness. The interviews were conducted in Indonesian language, taped recorded, transcribed verbatim, and the Indonesian transcripts were translated into English by two bilinguals naive to the purpose of the study. The English transcripts were treated as the main data for analysis. An inductive content analysis technique was used to develop stress source and coping strategy general dimensions. Seven stress sources and 14 coping strategy general dimensions were identified. The seven stressor dimensions, in order from most to least cited by the players, were: precompetition stressors, competition stressors, psychological demands of being an elite shuttler, social relationship problems, illness and injury concerns, failure issues, and personal life concerns. These findings provided further evidence that there is a range of stressor dimensions into which a wide variety of specific stressful situations fit, and that each individual perceived a different pattern of stressors. Results also revealed that the players used a range of strategies to cope with different stressors. Fourteen coping strategy general dimensions were developed from the players' interviews, including: social support and relationships; positive thinking and orientation; training hard, preparing, and

playing smart; personal mental strategies; rational thinking and self-talk; leisure activities; determining solutions to problems; personal physical fitness strategies; detachment; reactive behaviours; religious orientation; isolation; inability to cope; and preparing for the future. The results also indicated that one strategy might be used for coping with different stressors with different effectiveness, and to cope with one stressor, a player might also use more than one strategy simultaneously. Although stressor and coping strategy dimensions revealed in this study were mostly parallel with previous Western research, several differences across culture were also found. Moreover, gender, specialty of play, and levels of experience, in some degree differentiated the usefulness and the effectiveness of coping strategies used by the Indonesian elite badminton players. The research reported in this thesis also demonstrated that an open-ended interview technique can be used effectively with Indonesian elite badminton players. In identifying a high degree of similarity between the stress experienced and the coping strategies used by Indonesian elite athletes and those from Western backgrounds, along with some noteworthy differences, this thesis is encouraging for further research on stress and coping in elite sport in Asian cultures. It has also provided valuable information for practitioners whose aim is to help athletes cope effectively with the stress of being involved in elite sport.

Dedication

My interest in sport psychology

emerged and developed

through my softball life

I dedicate this thesis to softball

and anyone who loves it

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CHAPTER 1: INTRODUCTION

Everyone experiences stressful events, however, the level of stress associated with a certain situation depends on individual perception (Singer, 1986). In general, stress can reduce creativity, productivity, and the ability to enjoy oneself (Smith, 1993), therefore, being able to overcome stress is definitely important for trying to attain a higher quality of life.

In sports, especially competitive sports, competitors are likely to meet stressful situations, simply because of the competitive nature of sport itself (King, Stanley, & Burrows, 1987). Apart from that, much is at stake for individual competitive athletes; not only within the sport but also for ordinary human life concerns such as interpersonal relationships, family, education, and financial issues. Players who compete at the elite level of sport can, thus, be particularly vulnerable to stress (Madden, Kirkby, McDonald, Summers, Brown, & King, 1995).

Stressful situations in sport may appear at any time, such as prior to a game (e.g., fear of failure), during the match (e.g., booing from spectators), after competition (e.g., receiving unpleasant criticism from coach), or during training sessions (e.g., having tiresome routines). Several studies have reported that stress in sport frequently decreases performance (e.g., Burton, 1988; Gould, Petlichkoff, Simons, & Vevera, 1987), consequently, it is crucial to overcome stress.

A person's response in attempting to deal with stress is known as "coping", and every individual manages stressful situations in different ways. For example, Gould, Finch, and Jackson (1993) reported that, even though elite figure skaters had similar strategies for coping with stress, they used different ways of coping according to the demands of the situation. Thus, in elite competitive sports, coping strategies can be complex and dynamic (Crocker & Graham, 1995). In addition, Murphy (1995) argued that people equipped with few coping strategies will experience more stress than those having more strategies. Accordingly, mastery of strategies for coping with stress is a crucial part of competitive sport, especially at the top levels (Gould, Eklund, & Jackson, 1993; Hardy, Jones, & Gould, 1996; Jones & Hardy, 1990; Orlick & Partington, 1988; Scanlan, Stein, & Ravizza, 1991).

Background to the Thesis

One of the official competitive sports at the Olympic Games is badminton. The nature of badminton tournaments is that one of the two players or pairs who compete in each match has to win the game. There is no possibility of a draw or tied result. Therefore, after a match, there will always be a winner and a loser. This process is repeated until there is a tournament winner or champion. A badminton player, or shuttler, will not be acknowledged as a top player unless the shuttler has proven that he or she can compete successfully and become established in the world's top ranks, which is known as the International Badminton Federation (IBF) ranking system. To reach a higher rank in the world, a shuttler principally needs as many points as possible from accredited

tournaments. To get high points, a shuttler must win several tournaments, especially from the IBF major grand prix series. Moreover, badminton tournaments mostly use a knock-out system in which the loser in each round is eliminated from the competition. Winning, consequently, becomes the ultimate goal in every match.

For over the past two decades, Indonesian badminton players have been consistently accomplishing world level performances. Moreover, since badminton was initiated as a full medal sport at the Barcelona Olympic Games of 1992, Indonesia has gained its first two Olympic gold medals, and these medals, not surprisingly were from badminton. Therefore, there is great national pride to becoming an Indonesian elite badminton player. On the other hand, the Indonesian elite shuttlers definitely carry their country's highest hopes of success in world sport. Hence, being an Indonesian elite badminton player is assumed to be extremely demanding, and the experience of stress and tension is not unusual for such a player (Gunarsa, 1996).

Considering that the position of an Indonesian elite badminton player is potentially highly stressful, it is important to advise a shuttler on effective ways to cope with the various stressful situations elite badminton players face. To do this competently, it is necessary for anyone who aims to conduct psychological support work with the Indonesian elite shuttlers to explore the players' sources of stress, or stressors, and comprehend the strategies they use to cope with the stressors. This consideration is the underlying reason for the execution of this study.

One way to investigate such personal experience of stress is by using qualitative research methods. Patton (1990) stated, "Qualitative methods permit the evaluator to study selected issues in depth and detail" (p. 13). In order to understand which situations are perceived as stressful by the Indonesian elite shuttlers, and how the players cope with the stressors, it is necessary to explore their thoughts, feelings, and intentions. Unfortunately, it is not possible to observe what is in and on someone else's mind; hence "we have to ask people questions about those things" (Patton, 1990, p. 278). Accordingly, an in-depth interviewing technique as a part of the qualitative research method was the main method for this study, because it allows players to express their experiences in detail. Furthermore, this method is more appropriate than using current standardised coping questionnaires that are generally based on a Western cultural approach. The rationale for using an interview technique is discussed in more detail in Chapter 3.

Purpose of the Study

The purpose of the present investigation was to expand the research on coping with stressful situations in competitive sports by identifying the sources of stress and coping strategies used by elite athletes from a non-Western culture, that is Indonesian elite badminton players. There are four specific aims for this study:

1. To identify the sources of stress 'inside' and 'outside' badminton in relation to the players' lives as Indonesian elite badminton players.

2. To investigate coping strategies used by Indonesian elite badminton players in dealing with stress.

3. To examine the relationship between the stress sources and particular coping strategies used by Indonesian elite badminton players.

4. To examine the effectiveness of coping strategies used by Indonesian elite badminton players in dealing with specific stressors.

This chapter has introduced the background to the issues that led me to execute the study. Chapter 2 includes the review of literature, covering theories and research on stress and coping with stressful situations in general, and specifically in sport. Chapter 3 details the methods and procedures of data collection including its preparation. The results of data analyses on stress and coping are presented in Chapter 4. The discussion of the findings, recommendations for future research, possible implications for research and practice, and the conclusions of the study are presented in the final chapter.

CHAPTER 2: LITERATURE REVIEW

Although coping has been studied for more than two decades, it is only recently that the concept of ways of coping with stress, e.g., coping styles and coping resources, has been addressed in sport psychology (Hardy et al., 1996). To understand how the coping process is influenced by the stress process, an awareness of related concepts, such as arousal and anxiety is appropriate. The field is reviewed here by first considering the concept of stress, which is distinguished from similar terms like arousal and anxiety. The ways of coping perspective in psychology is then discussed and research on stress and coping is reviewed. This section focuses largely on questionnaire-based research, so the main measures used to assess ways of coping are presented. The literature review then covers the application of the ways of coping perspective to stress in sport, particularly at the elite level, again, based on the questionnaire measurement of coping. In-depth interview methods have recently been employed to gain further insight into ways of coping with stress in elite sport, and this research is reviewed in some detail. The literature review ends by describing how the present thesis aims to extend the qualitative study of ways of coping with stress in elite sport.

Stress

The Concept of Stress

The word "stress" originated from the Latin word "strictus," which means "narrow" or "tight" (Smith, 1993). Recently, there have been numerous

conceptualisations of the term "stress." A selected review of literature on theories, research, issues, and needs in the field of stress indicates that work in this field has been based principally on a concept developed by Hans Selye (Hamberger & Lohr, 1984), who is considered to be the "father" of modern stress theory (Monat & Lazarus, 1991). Selye (1976) defined stress as "the nonspecific response of the body to any demand, whether it is caused by, or results in, pleasant or unpleasant conditions" (p. 74). Selye stated that stress is not always physically damaging. He differentiated between stress as eustress and stress as distress. Both types of stress manifest similar physiological response, however, stress as eustress is perceived to be a positive or beneficial response, and stress as distress refers to negative, potentially destructive effects of the response. In this present study, I examined stress as distress.

Selye's empirical work was largely based on the study of the typical, physiological reactions produced in animals by physical stressors, such as cold and toxins. Even though Selye in his later research attempted to apply his concept to human situations, it principally remained a reactive model (Singer & Davidson, 1991). This concept does not suit clinicians, because their primary interest is in people, of course, but also in individuals' idiosyncratic behavioural and emotional reactions to psychological threats and challenges. Lazarus and Folkman (1984) suggested that stress be treated as "an organising concept for understanding a wide range of phenomena of great importance in human and animal adaptation" (p.11). Their conceptualisation is a transactional model, and in this approach

stress is defined as the outcome of interactions between the organism and the environment.

Psychological stress is differentiated from physical stress (e.g., Burchfield, 1979). Psychological stress is caused by frustration, loss, conflict, and failure; therefore, it is accompanied by emotions. On the other hand, physical stress is accompanied by feelings of discomfort, such as pain, which result from effects on the body, like injuries, burns, and infections. Hence, psychological stress is frequently associated with physiological stress. Take an example an athlete who got injured prior to an important game for her career. The athlete cried because of the pain, and at the same time, worried that she would not be fit for the game.

Monat and Lazarus (1991) defined three categories of stress (social, physiological, and psychological) that are believed to be related to each other. Social stress is concerned with disturbances of a social system or unit; physiological stress with the damage of tissue systems; and psychological stress refers to cognitive factors leading to the judgement of threat. Monat and Lazarus also indicated another orientation that defines stress into three categories, namely: stimulus definition, response definition, and relational definition. Stress stimuli, or in Selye's terms, "stressors", meaning that which produces stress, include all environmental sources of stress, such as natural disaster, as well as conditions arising within the person, for instance, hunger. The response definition of the term stress is commonly used in medicine and biology and refers to a state of stress. In this definition, stress is viewed as the reaction of the person or animal, and it might not be possible to identify the source of stress. The reaction usually

occurs in the form of a physiological response such as increased heart rate, respiration, or muscle tension. Many researchers have argued that examining stress only through physiological responses might be misleading. For example, someone's heart rate will rise sharply from doing aerobic exercise, while the individual seems to feel at peace and psychologically relaxed. So, only if the physiological response refers to a psychological stimulus can it be judged as a psychological stress reaction.

The relational definition goes further proposing that neither a stimulus nor a response conception defines stress, but it is the relationship between the stimulus and the response that identifies whether a person is experiencing stress. In stimulus-response approaches, therefore, a stimulus is acknowledged as a stressor when it produces a stressful physiological or behavioural response, and on the other hand, a response is stressful when it is produced by a threat, demand, harm, or load (Lazarus & Folkman, 1984).

The limitation of using stimulus-response definitions lead Lazarus and his colleagues to emphasise the relationship between the characteristics of the person and the nature of the environment. Lazarus and Folkman (1984) defined psychological stress as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19). Lazarus and Folkman's definition of psychological stress has recently become the conception largely used by researchers in the field of psychological stress in various areas, including sport psychology (e.g., Eklund, 1996; Scanlan et al., 1991). In summary, the term stress

has been defined in various ways. To better understand the stress concept, we need to be aware of related terms such as arousal and anxiety.

Stress, Arousal, and Anxiety

The terms stress, arousal, and anxiety are not synonymous, but refer to complex phenomena that, having similar symptoms, have been used interchangeably, which has often caused confusion. Thus, it is important to distinguish them from each other. Arousal refers to the intensity dimension of behaviour, the state of the organism varying on a continuum from deep sleep to intense excitement (Weinberg, 1989). In the Dictionary of Sport and Exercise (Anshel, 1991) anxiety is defined as a subjective feeling of perceived threat, sometimes accompanied by heightened physiological arousal. Thus, arousal is essentially a physiological response, and refers only to the intensity dimension of behaviour, whereas anxiety is primarily a cognitive process, and refers to both intensity and direction, and people are often aroused by cues in the environment that are perceived as threatening (Martens, Vealey, & Burton, 1990).

The differences between anxiety and stress are more vague. Consequently, the measures of them are sometimes used interchangeably. For example, Jones and Hardy (1990) cited that the stress response, which has often been referred to as anxiety, has been assessed predominantly through self-response questionnaires, such as the Competitive State Anxiety Inventory-2. A case in point is the research of Hoedaya (1997), who used the CAS-B which is a translated version of the CSAI-2 (Martens et al., 1990) in order to divide the research participants into high-stressed and low-stressed groups. Following Cox (1978), Folkman and

Lazarus (1985), Hardy et al. (1996), and Jones (1990), stress is regarded as a state in which some demand is placed upon the individual. In order to be able to cope with the situation, interaction between the organism and the environment is then required. The perception of the individuals about their ability to cope with the stressor, therefore, leads them to experience "strain" (Jick & Payne, 1980; Lazarus & Folkman, 1984). If individuals do not manifest symptoms of stress, it means the stressor has been coped with successfully; conversely, if they doubt their ability to counter the stressor, it is likely to be reflected in feelings of anxiety. So, anxiety occurs when individuals who experience stress are in doubt about the outcome of the response to the stressor. Although the terms stress and anxiety are not synonymous, they do overlap. In summary, to understand stress, one should be aware about the differences and relations between stress, arousal, and anxiety. In the present study the focus is coping with stress, so I mainly discuss issues concerning stress rather than anxiety or arousal.

Measures of Stress

Stress measures have been developed in a number of different ways. Basically, the approaches to measure stress are categorised into three types: physiological stress measures, performance tests, and self-reports (Brannon & Feist, 1992). These measures are now described with more focus on self-reports.

Physiological stress measures. Physiologically, stress levels are detected through the current status of biological, physiological, and biochemical indices that assess stress symptoms, such as heart rate, perspiration rate, galvanic skin response, blood pressure, and secretion of catecholamines (Brannon & Feist,

1992). According to Brannon and Feist, this approach to stress measurement is easily quantified, direct, and highly reliable. Yet, as mentioned previously, judging that someone is stressed only through measuring physiological status might be misleading, because a person's psychological state could be euphoric or fearful. One way to eliminate the misleading diagnosis of stress is by combining the physiological measures with other approaches, such as performance tests or self-reports.

Performance tests. Brannon and Feist (1992) stated that performance tests typically measure the after-effects of exposure to a stressor and are based on the assumption that people who are suffering stress will perform poorly. This approach can be administered through the examination of one's performance records, and observation. For example, a swimmer could have performed well in training, but at the decisive race she swam far under her best-time, and her bad performance was thus labelled the result of stress. Again, solely measuring stress through performance tests may be misleading. Therefore, other factors related to performance should be considered in measuring stress.

Self-report measures. Another approach to measuring stress is by examining an individual's perception of stressful situations. It can be done by using questionnaires or by interviewing. A brief review of questionnaire types of self-reports is presented, followed by a consideration of interview techniques in measuring stress.

Psychological stress may come from daily hassles (e.g., getting stuck in traffic, being late to catch a train) and major life events, such as divorce,

retirement, or having problems at work, that might cause substantial changes in life. The impact of such life events is considered to be relatively long-lived. Some questionnaires on psychological stress have been constructed to measure the amount of stress that someone has experienced in life as the result of the short-term daily hassles, whereas others assess long-term stress effects due to major life changes over a certain period of time, such as six months or a year. One of the most widely used self-report stress tests is the 43-item Social Readjustment Rating Scale (SRRS) that was developed by Holmes and Rahe (1967) to assess life stress experienced by individuals over a year's time. The 43 items represent nine categories of sources of stress: personal, family, community, social, religious, economic, occupational, residential, and vocational life stressors. The items cover life events, such as death of spouse, pregnancy, business readjustment, son or daughter leaving home, trouble with boss, change in residence, and vacation. Each item has a value, based on the magnitude of the impact of that stressor, ranging from 11 to 100. For example, death of spouse has the highest score of 100; the marriage score is 50, and the lowest score is 11, which is given to the "event of minor violations of the law". A total score of 300 on the scale has typically been seen as a sign of high risk of illness. According to Smith (1993), life events became the most studied dimension of stress and health, following the development of measures like the SRRS. Later studies revealed relationships between life events and other health related events, such as accidents, athletic injuries, and heart disease. Because the SRRS was developed

and used among clinicians, it was not surprising that its primary application into sport was in the area of sports injury.

According to Cryan and Alles (1983), Holmes used SRRS with athletes to discover the association between life stress and football injuries in university football players. Furthermore, Holmes, together with Bramwell, modified the SRRS so that it would be more appropriate to football players, and called it the Social and Athletic Readjustment Rating Scale (SARRS). The life events contained in the questionnaire are those likely to be experienced by university male football players. The SARRS contains 48 items, and athletes circle the number of times the events occured in the previous 12 months. The SARRS includes athletic items, however, it is still primarily a test of general life events. Although an athlete, will not be free from the usual daily hassles and general life events, a specific measure for sources of stress in sport is still needed.

One questionnaire that was designed to discover sources of stress specifically in sport settings was developed by Madden, Summers, and Brown (1990) to measure perceived stress in competitive basketball situations. The Stressful Situations in Basketball Questionnaire (SSBQ) consists of 20 items relating to a range of defensive, offensive, and neutral situations or game states occurring in competitive basketball. These items consists of situations such as making skills errors, game tension, team performance, errors on specific tasks, being outplayed, and errors in general play or strategic errors. Degree of stressfulness of the items is rated using a 5-point Likert-type scale, ranging from "not stressful" (0) to "very stressful" (4). Additionally, at the end of the items, the

participant lists and rates other important stressful situations. Cumulative stress scores can be established for individuals to categorise the player into low, mid, or high stress groups. For example, in the Madden et al. study, the score for low stress was considered to be within the range of 10 to 43, the mid stress range of scores was 44 to 54, and high stress was within the range of 55 to 72.

One specific measure developed to examine sources of stress in soccer officials, the Ontario Soccer Officials Survey (OSOS), was validated by Taylor, Daniel, Leith, and Burke (1990). The OSOS, then, was modified by Rainey (1995) for use with baseball and softball umpires. For each of the 29 items, umpires rate how much the given sources of stress on the list contribute to the amount of stress felt. Responses are given by circling a number for each item (i.e., 3 = strongly; 2 = moderately; 1 = mildly; or 0 = did not contribute to their feeling of stress.)

Another way to administer self-report assessment of stress is by interviewing the individual who is believed to have experienced the stress. Unlike questionnaires in which the individuals are asked to report how they perceive a particular situation that is determined by the researcher, in the interview approach the individuals themselves usually determine what situation is perceived as stressful. For example, Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen (1986) interviewed 85 married couples once a month for six months, using a structured protocol to elicit self-report information about the most stressful situation that they had encountered during the previous week. The stressor that

was identified, then, was used as the target situation for completing a coping questionnaire.

Another way to conduct an interview is by applying an open-ended interview technique. Scanlan et al. (1991) have successfully adopted the qualitative open-ended interview technique into sport psychology research. Scanlan et al. conducted a three-phase study with former elite figure skaters, and in the third phase they examined sources of stress in competitive figure skating athletes by using an open-ended interview technique. The skaters who participated in the study were no longer active as athletes when the interviews were conducted. The participants were asked to identify the specific sources of stress in their overall skating experience, from novice level until retirement. At the beginning of the interview, each participant was asked to read the following definition of stress before the next questions were addressed:

> When we discuss stress or pressure now, I am referring to the negative emotions, feelings, and thoughts that you might have had with respect to your skating experience. These would include feelings of apprehension, anxiety, muscle tension, nervousness, physical reactions (such as butterflies in the stomach, shaking, or nervous sweating), thoughts centred on worry and self-doubt, and negative statements to yourself (p. 105).

Once the participants understood the instructions and the stress definition, the interviewer asked them the following open-ended question in order to detect the participants' stress sources:

> Thinking back over the various aspects of your skating experience during the time you were at Phase 3 (during the most competitive phase of their careers), again, from novice level until your retirement, what do you recall being the major causes or sources of your stress pertaining to your skating experience? Again, keep your perspective as a skater back in Phase 3 and not how you feel now (p. 105).

After the participants described their stress sources, the interviewer asked general probes to seek any other sources of stress they might have experienced. The interviewer in the study, then, asked specific elaboration probes when the skater mentioned something that was not fully understood by the interviewer (e.g., "I'm not sure I understand exactly what you mean. Would you please go over that again?"). The participants were also asked to repeat or clarify the source mentioned when the interviewer did not fully understand what was said. At the end of each interview, the skaters were asked a general probe to ensure that each participant had discussed all of their sources of stress (e.g., "Were there any other causes of stress in your skating that we have not covered?"). To minimise interviewer bias and ensure that all participants were asked identical questions in the same order, an interview guide was developed. All interviews were transcribed verbatim. These transcripts were analysed using the inductive content analysis procedure. By using this procedure, the selected quotes were organised into meaningful and interpretable categories, and then the categories were clustered into higher level themes until the analysis reached the highest or most general themes. As a result, five major sources of stress emerged from the data.

Gould, Jackson, and Finch (1993) also used an in-depth interview technique to examine stress sources of US national champion figure skaters in order to further verify the findings of the Scanlan et al. (1991) study, and extend them by examining stress sources specific to the demands of repeating as a national champion. Gould et al. divided the time frame of the study into two phases. Phase 1 included the time from when the skater first began skating until they first won a national championship title, whereas Phase 2 covered the time after first winning the national championship until either they retired or the time of the interview. The procedure of interview in the Gould et al. study was similar to that used by Scanlan et al., except that Gould et al. used an extensive telephone, instead of face-to-face, interview. Prior to the interview, each participant was sent a copy of the interview guide to familiarise themselves with the types of questions that would be asked. Similar to the Scanlan et al. analysis, Gould et al. also content analysed the interview transcripts to reveal the sources of stress for the skaters. In this interview technique, one source of reliability of the data stems from the credibility of the interviewer, because in interview research, the interviewer is the instrument of data collection (Patton, 1990). Further comments on credibility and trustworthiness are discussed in Chapter 3.

In summary, stress has been measured through different modes that have been categorised as physiological, performance, and self-reports. The self-report method has employed different techniques, such as questionnaires and interviews.

Research on Stress

Overview of research on stress. Research on stress began in physiology laboratories examining the effects of stress on homeostasis with markers, such as blood pH, temperature, and plasma glucose levels (Smith, 1993). According to Smith, during World War II, researchers emphasised the stress of war-related events, such as soldiers' reactions to combat. The focus of stressors, later, turned to dramatic events of the time, such as natural disasters, and President Kennedy's assassination. Then, after the 1960s, researchers' attention shifted to less dramatic everyday changes in life, such as family matters, personal problems, occupational concerns, and vocational life.

One of the first researchers to consider the importance of daily life events systematically was Meyer (Lief, 1948, as cited in Smith, 1993). Meyer made important observations in his patients' lives through "life charts," and discovered that illness tended to cluster at those times when major events occurred. Another physician who also carefully noted the emotional states and life circumstances surrounding his patients' illness was Wolff (Wolff, Wolff, & Hare, 1950, as cited in Smith, 1993). Wolff examined the effects of rapid social changes in central India and found that it was "change" that had caused people to experience higher levels of stress. The concept of life change was used as the basis for the development of the SRRS.

Research on stress in sport. Sport or exercise participation can be stressful. To examine sources of stress in sport participants, several studies have been

conducted using either questionnaires (e.g., Madden et al., 1995; Rainey, 1995), or interviews (e.g., Gould, Jackson, & Finch, 1993; Scanlan et al., 1991).

Madden et al. (1995) administered the SSBQ to measure perceived stress in competitive basketball situations. The participants were 84 Australian male basketball players competing in one area of Victoria, aged between 15 and 44 years ($\underline{M}$ = 23 years). This research revealed that two items rated by the players as the most stressful of the 20 situations experienced in competitive basketball, were: "a slump in personal form" and "the team is losing and the opposition is holding up play." These two items pertained to scales of "errors in general play" and "being outplayed," respectively. The average rating for each of these items was between "moderately stressful" and "very stressful" ($\underline{M}$ = 3.0, $\underline{SD}$ = 1.0).

Analyses of data indicated that there were no differences associated with experience (i.e., years of play in). One possible reason for this was that the playing skills and experience of each of the players in different competition levels were similar. Additionally, players who reported that they trained more often perceived negative team performance situations as more stressful compared to those who trained less. The reason for this may be because the players who trained more had higher expectations of success than those who trained less. This issue shows that the participants were not athletes who have as strict training schedules as those of elite athletes. Further research involving higher levels of competitors is needed to clarify whether the frequency of training is related to expectation of success.

The atmosphere of elite level competitions in any sport tends to lead to stress, and elite sport has attracted researchers interested in the study of stress. Baillie and Ogilvie (1996) defined "elite athletes" as "those whose pursuit of excellence in sport has led to their participation and success in competition at the Olympic or professional level (p. 335)." According to this definition, only athletes who compete and achieve success at the level of Olympics or those who are professionals would be categorised as elite athletes. Unfortunately, some researchers, who have claimed that they studied elite athletes, have examined athletes who participated at levels not expert enough to be labelled as elite. For example, Scanlan et al. (1991) claimed that their participants were former elite figure skaters, but only eight among 26 skaters who participated in their study had competed in world championships, whereas the rest of the participants competed at novice, junior, or senior levels. The Scanlan et al. study, however, has been cited as a guide for conducting qualitative research by several researchers (e.g., Gould, Jackson, & Finch, 1993; Hoedaya, 1997; James & Collins, 1997). Five major sources of stress emerged from the Scanlan et al. study. These consisted not only of stressors in competition, but also stressors from noncompetition. They included "negative aspects of competition," "negative significant other relationships," "demands/costs of skating," "personal struggles," and "traumatic experiences." Scanlan et al., then, separated the participants into three sub-groups, based on their highest competitive skating level achieved. Scanlan et al. discovered that the three groups were identifying similar categories of stress source, but all groups experienced stress from a diversity of sources. Additionally,

Scanlan et al. found that the novice/junior skaters group mentioned the competitive-failure and interpersonal-conflict themes more frequently compared to their counterparts in the world/Olympic team group. Scanlan et al. argued that because the novice/junior skaters did not advance to compete at the senior level, they probably encountered greater incidence of competitive failure, which in turn could have created more conflict with significant others. Apart from that, other negative aspects of competition were experienced similarly by all skaters. A possible reason for this was that competition in this particular sport, figure skating, was similar for novice and elite athletes.

Another study following the procedures of Scanlan et al. (1991) was conducted by James and Collins (1997). They interviewed 20 athletes from 11 sports (e.g., field hockey, soccer, gymnastics, tennis) with different levels of experience (e.g., club, semiprofessional, international) to identify sources of stress during competition. A hierarchical analysis of the interview data arrived at eight general dimensions of sources of stress that were comprised of 48 raw data themes. The eight dimensions and their respective percentages of the total raw data themes were: significant other stressors (22.9%), social evaluation and self-presentational concerns (20.8%), competitive anxiety and doubts (16.7%), perceived readiness issues (14.6%), nature of competition (8.3%), environmental demands (8.3%), not performing to required standard (4.2%), and miscellaneous factors (4.2%). James and Collins reported that sources of stress may affect performance either by increasing the perceived self-presentational importance of the competition, or by increasing the trend to perform poorly and lowering self-

presentational efficacy. This seems consistent with the Parfitt, Jones, and Hardy (1990) statement that stress can have a negative, positive, or no effect upon performance.

A study which involved only elite athletes was conducted by Gould, Jackson, and Finch (1993). They also employed a qualitative interview method to investigate the athletes' sources of stress. Participants in the study were 17 US present and former national champion figure skaters. The results revealed six general dimensions of stress experienced during the phase prior to the time when the skaters won the national title, and seven stress source general dimensions after the skaters won the title. From the comparison of stress sources before and after they became national champion, Gould et al. found that overall, the general stress sources were similar between the two phases, particularly in the "physical demands on skater resources" and "competitive anxiety and doubts" dimensions. High performance expectations were also identified as stressors in both phases, although the focus was different. In Phase 1, performance potential was focused on more often, whereas in Phase 2, the focus on performance expectation was more related to living up to national champion standards. Interestingly, "life direction concerns" was a dimension that was revealed in the phase after winning a national title, so this seemed to indicate that before winning the national title; most skaters were not thinking about the end of their career. In general, the study indicated that the national figure skaters interviewed in the study experienced more stress after they became national champions than before doing so, and the

chief explanation cited for this increased stress was additional expectations of being a champion, imposed either by others or by themselves.

Comparing the Gould, Jackson, and Finch (1993) study with that conducted by Scanlan et al. (1991), the majority of the higher order themes identified by Gould et al. fit within the Scanlan et al. general dimensions. This is not surprising, because both studies used a similar sport; however, despite the parallel findings between these two studies, Gould et al. also identified some general stress source categories that did not emerge in the Scanlan et al. study. For example, the themes of "too much media attention," "undesirable training situations," and "pressure to skate up to national champion standard" emerged in the Gould et al. study, but not in that of Scanlan et al. Differences in skating levels between participants in both studies might explain these variations. All skaters in the Gould et al. study had held, or were holding, national champion titles, whereas less than half of the skaters who participated in the Scanlan et al. study had competed at the world level. As national champions, it is not surprising if the skaters in the Gould et al. study were receiving more attention from the media, having more expectations placed on them by others, and under these pressures they felt that they required better training facilities.

The previously mentioned studies on stress sources all involved western athletes, particularly Australian and American. Another stress source study has been completed by Hoedaya (1997) as part of his doctoral research. That thesis was completed after data collection for the present investigation has occurred. Hoedaya used 283 team sport athletes from Australia and Indonesia as his study

participants. The athletes played sports that included baseball, basketball, field hockey, softball, and volleyball. They were from different levels of competition (A-grade local to state or provincial level). In order to identify the sources of stress, an interview-based pilot study was conducted to at least one Indonesian and one Australian athlete from each sport. These athletes were asked to recall the major sources of stress they experienced prior to and during the competition. Hoedaya limited the sources of stress to only pregame and game acute stressors. He also adapted the probing technique in the interview guide from Scanlan et al. (1991) to clarify and elaborate statements addressed by athletes. Then, the athletes were asked to indicate the level of each stressor on a 5-point Likert type scale (1 = not at all stressful, to 5 = very stressful). Following that, the athletes indicated the major sources of pregame and game acute stressors. In this way, a list of pregame and game acute stressors was obtained. The Australian athletes were interviewed by the author, whereas research assistants interviewed the Indonesian athletes.

As a result of the data collection by Hoedaya (1997), seven categories of pregame stress sources were revealed from the interviews, including: presentation of significant others, coach expectations, being ignored by a team-mate, opponent's playing quality, importance of a game, doubting own performance, and family problems. Not surprisingly, unlike the pregame stressors, sources of stress in the game only involved sport-related categories, these were: key player gets injured, a team-mate gets dismissed, opponent scores in a close game, bad call from the umpire, a mental error, a performance error, a threat by the opponent, booing from the spectators, and failure to meet self-expectations.

Further analyses showed that cultural differences occurred for selected pregame situations. For instance, Indonesian athletes were more stressed when being ignored by a team-mate, compared to the Australian athletes. Further cross-cultural research is needed to get more understanding of the major sources of stress of athletes from different cultural backgrounds.

Interestingly, research on stress in sport has not been conducted only to investigate the sources of stress of athletes, but also to reveal stress sources experienced by officials, such as referees or umpires. As mentioned before, Rainey (1995) examined sources of stress among baseball and softball umpires in one midwestern state in America. At about the same time, Anshel and Weinberg (1995) identified sources of acute stress in male Australian and American basketball referees. Both studies used self-report questionnaires, and discovered that interpersonal conflict and fear of failure were two major sources of stress experienced by the referees or umpires.

In summary, research on sources of stress in sport has been conducted using various methods, different measures, and a range of participants from different sports, either individual or team sports, and from novice to elite athletes. Some similarities and differences have been found, according to gender, level of experience, nature of sports, and cultural background. Determining sources of stress is crucial to the examination of the way in which athletes cope with stressful situations.

Coping with Stress

Overview of Coping Approaches

Although coping has been studied only over the last 30 years, there is a vast literature on coping in psychology and its various subfields. The majority of recent research on coping with stress adopts the model proposed by Lazarus and Folkman (1984), which is based on Lazarus's work with his colleagues over a number of years. Their theory of stress and coping, which is known as the transactional theory, is considered a landmark for research on coping with stressful situations, (e.g., Carver, Scheier, & Weintraub, 1989). The transactional theory, research on coping, particularly in sports, and research on coping in non-western cultures are discussed in this section.

Lazarus's Transactional Theory

An overview of the cognitive theory of stress and coping, which is summarised from several publications (particularly Coyne & Lazarus, 1980; Folkman, 1984, 1992; Folkman, Chesney, McKusick, Ironson, Johnson, & Coates, 1991; Folkman & Lazarus, 1985; Lazarus & Folkman, 1984; Monat & Lazarus, 1991; Zeidner & Endler, 1996), is presented in this section.

Coyne and Lazarus (1980) argued that stressful emotions and coping are products of cognition; however, they did not mean that the way a person appraises or constructs his or her relationship with the environment is a one-way interaction only. The cognitive theory of stress and coping is "relational" and "process oriented." The relational characteristic of the cognitive theory of stress and coping is evident in the definition of stress that was mentioned previously. Stress refers

to a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being.

In an earlier development of stress theory, stress was defined either as a stimulus or as a response. For example, Burchfield (1979) defined stress as "anything that causes an alteration of psychological homeostatic process" (p. 662). According to Burchfield's definition, stress is viewed as a stimulus, a cause that has an effect on something. Mikhail (1981) defined stress as "a state which arises from an actual or perceived demand-capability imbalance in the organism's vital adjustment actions..." (p. 14). Mikhail's definition of stress refers to stress as a response to perceived inadequate cognitive or behavioural actions. In the relational definition of stress, stress is not a stimulus or a response, nor does it belong to the person or the environment only. "Stress is a particular relationship between a person and the environment" (Folkman, 1984, p. 840).

The "process oriented" aspect of cognitive theory of stress and coping has two meanings in relation to the cognitive theory of stress: dynamic and bidirectional. The dynamic relationship refers to the view that the person and the environment are changing constantly. In a bidirectional relationship, the person and the environment act on each other. Folkman (1984) also noted that others (e.g., Averill, 1973; Thompson, 1981), who have tried to deal with questions concerning the relationship between personal control and outcomes, concluded that whenever beliefs about and appraisals of personal control are to be considered, the relational perspective means that control must be viewed in the

particular person-environment relationship in which it is embedded. The theory of psychological stress and coping identifies two processes: cognitive appraisal and coping. These two processes are critical mediators of relations between the person and the environment that are stressful and their immediate and long-term outcomes.

Cognitive appraisal. The concept of cognitive appraisal has been applied by the Lazarus group since the 1960s to refer to a person's continually reevaluated judgements about demands and constraints in ongoing transactions with the environment and his or her resources and options for managing them. The meaning of an event, then, is determined by cognitive appraisal processes, and these evaluative processes determine the person's stress response, the various emotions experienced, and the adaptational outcomes. There are two major components of appraisal processes: primary appraisal and secondary appraisal. Through primary appraisal a person judges the significance of a particular transaction with respect to well-being. In secondary appraisal, the person evaluates coping resources and options.

Primary appraisal refers to the cognitive process of evaluating the significance of an encounter for one's well-being, which leads to asking the question "Am I in trouble or not?" Responses to the question come in three forms, that the transaction is (a) irrelevant, (b) benign-positive, or (c) stressful. An encounter judged as irrelevant is considered to have no personal significance for one's well-being, therefore, the encounter can be ignored. A benign-positive appraisal signals that a transaction does not tax or exceed the person's resources,

and the encounter is judged as desirable or beneficial. The third form is stressful appraisal. Stressful appraisals include appraisals of threat, harm-loss, and challenge. All three forms of stressful appraisals contain some negative evaluation of one's present or future state of well-being, however, the challenge encounter provides the most positive or least negative one. To distinguish between harm-loss and threat, the current time perspective of the person who appraises it is crucial. Harm-loss refers to injury or damage already experienced, such as loss of a loved one, damage to a friendship, loss of self-confidence, or incapacitating illness or injury. Threat refers to the same type of damage, so there is potential for harm-loss, but threat involves an expectation of what has not yet happened. Both harm-loss and threat appraisals are characterised by negative emotions, such as resentment, sorrow, fear, hate, or anger. Sometimes, it is difficult to isolate harm-loss and threat appraisals empirically, yet the distinction is theoretically important. As mentioned before, in harm-loss appraisal the person evaluates damage that has already happened, therefore current concerns and coping efforts will focus on the present context. With threat, the focus will be on the future. In order to maintain the existing state of affairs or prevent a harm occurring in such threatening circumstances, it is necessary for the person who encounters the threat to block it, overcoming or neutralising it. Coyne and Lazarus (1980) believed that shifts in these observable coping patterns would reflect changes in the person's appraisal, either because the individual reevaluated existing information or because they gained access to new information.

In the study of stress, it is more important to distinguish between threat and challenge, rather than between threat and harm-loss appraisals. Challenge appraisals are characterised by positive, pleasurable emotional tones, such as excitement and eagerness, whether the person faces a potential for gain and mastery, or, on the other hand, encounters the potential for harm. Moreover, challenge involves a judgement that the demands of a transaction can be met and overcome.

Any form of primary appraisal, whether harm-loss, threat, or challenge, is constructed by an array of "person" and "situation" factors. Beliefs and commitments are two among the most important person factors. "Beliefs are preexisting notions about reality that serve as a perceptual lens" (Folkman, 1984, p. 840). Either general beliefs (e.g., religious) or specific beliefs (e.g., confidence in a particular person) are crucial to primary appraisal.

Another important determinant of a stressful encounter in primary appraisal is commitment. Commitment reveals aspects that are meaningful or important to the person. The role of commitments in primary appraisal also can be understood by thinking of commitments as determining the stakes that are involved in a specific encounter. For example, a conflict between partners in sport may pose a threat to a commitment to a valued partnership. The partnership is at stake, consequently, the conflict is appraised as stressful by the persons involved.

Primary appraisal is also influenced by situational factors, including the nature of the harm or threat, familiarity of events, how likely all of this is to occur, timing of the occurrence, and the clarity of the expected outcome. Another

factor that should be noted is that various manifestations of the issues involved in stressful appraisals are not necessarily mutually exclusive, because in reality people have complex appraisals. For example, challenge is often mingled with threat, because the chance for mastery, that is the challenge, also contains the possibility for harm or loss. Challenge appraisal would not be stressful without threat (Folkman et al., 1991).

Secondary appraisal refers to the person's evaluations of coping resources, options, and constraints, with respect to their probability of success. Lazarus and Folkman (1984) indicate that secondary appraisal evaluation is a complex process that involves consideration of which coping options are available, the estimation that a given coping option will function properly, and the likelihood that one can employ a particular strategy or a set of strategies effectively. Furthermore, Folkman (1992) cited that this process, thus, can be seen as an answer to the question "What can I do?" about the encounter that has been perceived through primary appraisal. Even though the content of what is being evaluated in primary and secondary appraisal is different, the two forms of appraisal processes operate interdependently in shaping the degree of stress, the strength, and the quality (or content) of the emotional reaction. For example, if a person has a strong commitment to the outcome of an encounter, even if he or she believes that the outcome can be controlled, if the stakes are high, substantial stress can still occur.

Coping. Lazarus and Folkman (1984) defined coping as the person's constantly changing cognitive and behavioural efforts to manage (master, reduce, or tolerate) specific external and/or internal demands that are appraised as taxing

or exceeding the person's resources. Folkman et al. (1986) discussed three key features of this definition of coping to demonstrate that coping is dynamic. The first feature of the definition is that coping is "process oriented." This means that the focus of coping is on what the person actually thinks and does in a specific stressful encounter, and how this changes as the encounter develops. Secondly, coping is viewed as "contextual," that is, particular person and situation variables together shape the coping efforts. Lastly, in this definition, coping is not judged as good or bad, because coping is defined simply as a person's effort to manage demands, "without considering the outcome" of the efforts.

Previous studies by Folkman and Lazarus (1980, 1985) supported the idea that coping usually includes two major functions: regulating stressful emotions (emotion-focused coping), and altering the troubled person-environment relation causing the distress (problem-focused coping). Those studies indicated that problem-focused coping was used more frequently if the person appraised the encounters as changeable. According to Folkman et al. (1991), problem-focused coping not only includes cognitive-oriented processes, such as problem-solving and decision-making, information gathering, advice seeking, interpersonal conflict resolution, time management, and goal setting, but also includes problem-oriented behaviours, such as fixing a broken part, joining a weight control program, or following a prescribed medical therapy. In contrast, emotion-focused coping was used more frequently in encounters that the person appraised as unchangeable, than in those appraised as changeable. This also includes cognitive and behavioural efforts. The function of cognitive efforts is to change the

meaning of a situation without changing the environment, through the use of techniques, such as social comparisons, cognitive reframing, looking on the bright side of things, and minimisation. Behavioural efforts are used to make oneself feel better, as by doing exercise, relaxation, meditation, talking to someone who cares and understands, visiting a support group, and escaping through the use of alcohol or drugs.

The availability of resources for coping influences coping processes (Folkman et al., 1991). These resources include skills and abilities, social resources (people from whom one can obtain support), tangible resources (e.g., money to purchase goods and services), physical resources (health and stamina), psychological resources (e.g., morale, self-efficacy), and cultural, institutional, and political resources (e.g., social groups, laws). Some coping resources, such as knowledge and money may affect the options of coping, whereas other resources, such as stamina and morale, may affect coping persistence. Situational factors also influence coping processes. If a situation is appraised as amenable to change, forms of problem-focused coping are needed, whereas when a situation is appraised as not changeable, it calls for emotion-focused coping.

Reappraisal. As mentioned earlier, the individual constantly evaluates changes in the person-environment relationship. Changes may occur if there is new information, fortuitous occurrences in the environment, or through the individual's coping efforts. Consequently, situations that were initially appraised as unchangeable, for instance, may be reappraised as changeable, and vice versa. Apart from that, threatening situations may be reappraised as benign or

challenging; and challenging situations later may be appraised as threatening. As a result, coping efforts may shift from efforts to change the environment (problem-focused coping) to efforts to adjust emotional responses to a difficult situation (emotion-focused coping), or shift from an active mode to an avoidant mode. Folkman et al. (1991) summarised this appraisal and coping model as shown in Figure 2.1.

A Working Model of Coping in Sport

In order to form a more comprehensive understanding of coping in sport, Hardy et al. (1996) recently developed a stress-coping model. Hardy et al. integrated the conceptual and empirical research on coping into a model that they called a "working model of coping in sport." The stress and coping aspects in the coping model of Hardy et al. are basically an adaptation of McGrath's (1970) stress model and the Folkman et al. (1991) coping model, combined with other literature on coping in sport psychology.

Hardy et al. (1996) delineated the working model of coping in sport in two parts. Part 1 is stress appraisal, and Part 2 is coping. Then, Parts 1 and 2 of the model were integrated into the full model as shown in Figure 2.2. In this model, the stress-appraisal process begins with some psychological or physical environmental demands that have the potential to become stressors. For example, a swimmer must win in a career best time in a test-race to qualify for the Olympic squad. The environmental demands, however, are not always perceived as stressful; it depends on how the athlete appraises the situation. Appraisals, including primary appraisal and secondary appraisal, are made relative to threat,

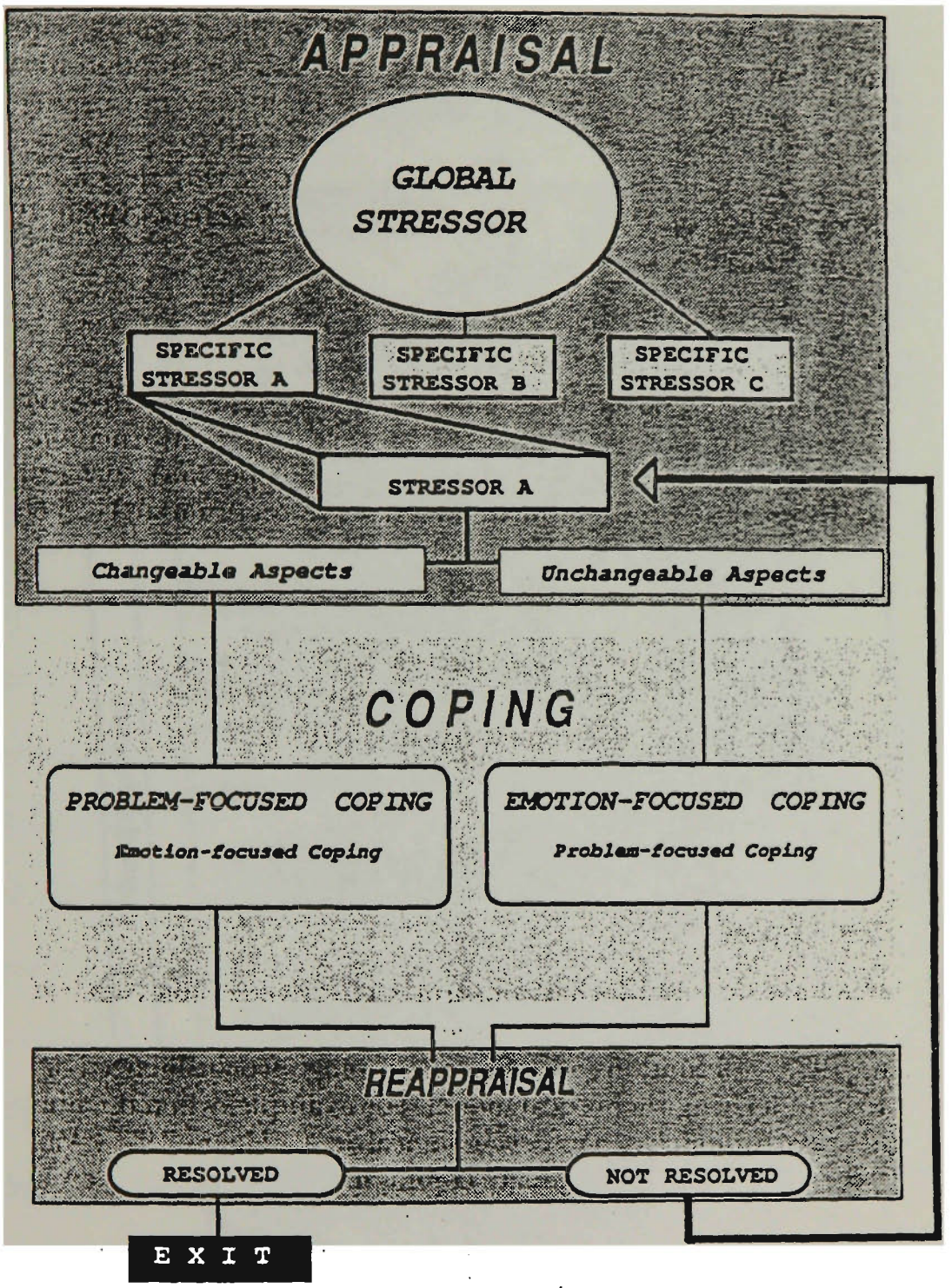

Figure 2.1. Appraisal and coping model (Folkman et al., 1991, p. 246).

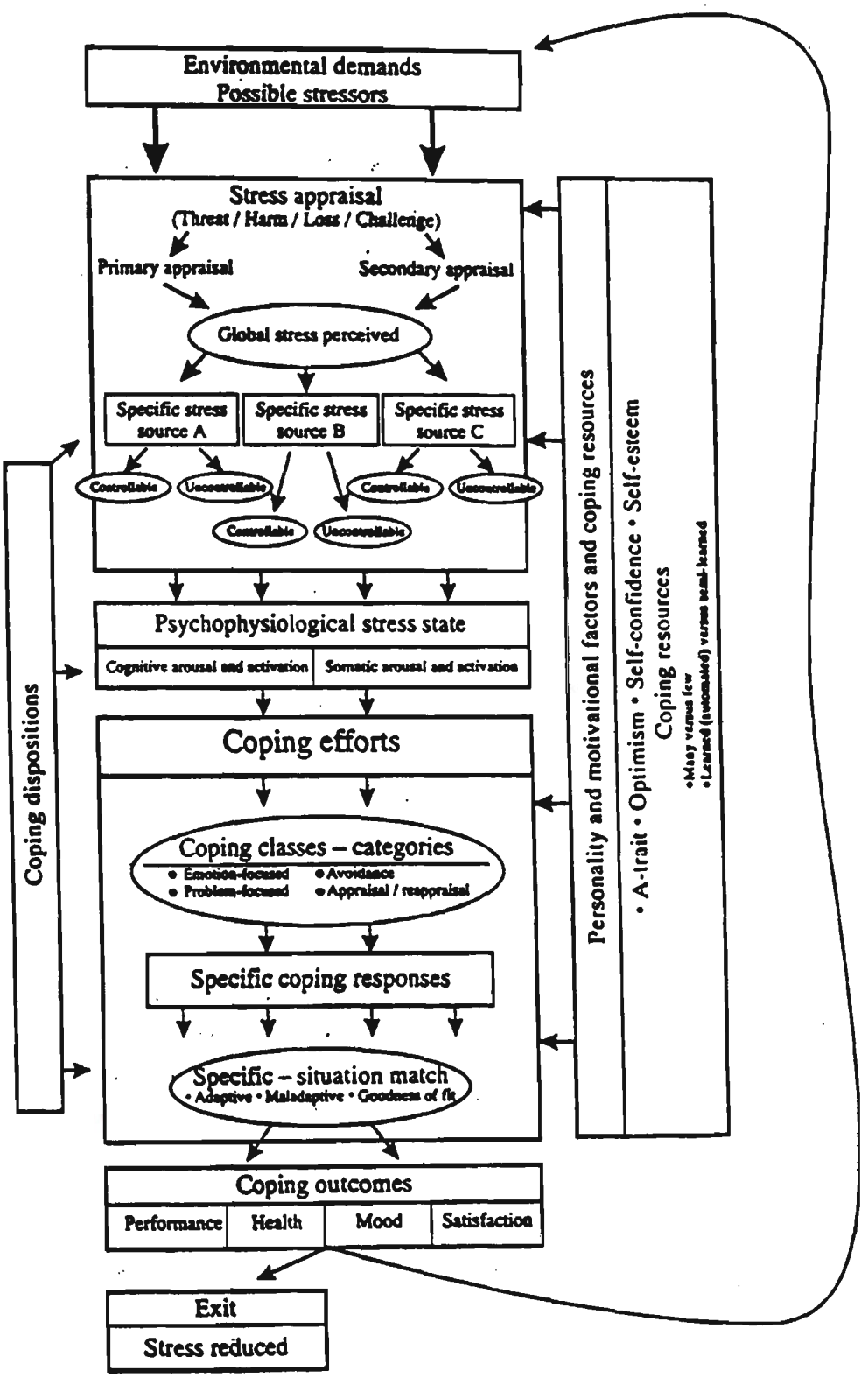

Figure 2.2. The full working model of coping in sport (Hardy et al., 1996, p. 226).

harm/loss, and challenge. When an athlete perceives harm or threat, as a result, global stress is perceived. To help an individual cope better with the stress, identifying a specific stressor is crucial, followed by examining whether the stressor is controllable or uncontrollable. As a result of appraisal, a psychophysiological stress state will occur as a reflection of cognitive arousal, somatic arousal, and activation. This stress appraisal process is identified as Part 1 of the model, and is influenced by personality and motivational factors, such as trait anxiety, self-confidence, optimism, and self-esteem.

Once the psychophysiological stress state has occurred, the athlete makes efforts to effectively cope with the stress source. The athlete may use various coping categories (e.g., emotion-focused, problem-focused, avoidance, and appraisal or reappraisal coping) as their specific coping responses. The nature of specific coping behaviours or strategies focuses upon the adaptiveness or maladaptiveness of the strategy, and whether goodness-of-fit exists between the specific coping responses used and the specific stress source identified in Part 1 of the model. The specific coping responses and situation match will in turn have an influence on coping outcomes, such as health, performance, mood, and satisfaction. Similar to stress appraisals, coping efforts are also influenced by each individual's coping dispositions or styles, as well as the individual's coping resources, either learned or automated. This process is depicted as Part 2 of the model.

Furthermore, when a coping effort is successful and stress is reduced, an exit box exists which represents that stress is no longer appraised, so that coping

efforts are no longer needed. An arrow from the bottom of the model also leads back to the environmental demands box at the top of the model, represents the closed-loop nature of the model and shows how the model will continue in a circular fashion until the stress is alleviated, or perhaps in some cases the frustration of not being able to cope becomes an additional source of stress.

Measures of Coping with Stress

Questionnaires on coping. The measurement of coping remains an uneasy exercise in practice. Recently, coping activities have been the focus in assessing an individual's coping skills (Carpenter, 1992). Usually, by using the coping activity approach, the individual is asked about what he or she has done when faced with a particular stressor. Carpenter also argued that: "Even when open-ended approaches are used ("tell how you coped with..."), people quite naturally tell what they did or thought, rather than describe what kind of person they are" (p. 8).

Another way to assess coping is by using a structured approach in which the individual is asked to report the frequency of each of the potential coping behaviours on a list. For example, Smalt (1988) developed a coping questionnaire for her Masters research to identify coping strategies of young female gymnasts in dealing with precompetition stress. She compiled a list of coping strategies from different sources, such as literature review, observation, and interviews with gymnasts and their coaches. The list, was then translated into a Likert-type scale ("rarely" to "often"), which was applied to each strategy in the list. It might be important, however, to determine the extent of time spent using each coping

behaviour, and the amount of effort expended on each strategy, rather than just recording the frequencies of coping behaviours.

Most of the recent studies on coping with stressful situations in competitive sports have used questionnaires developed specifically for those studies, but based on the Folkman and Lazarus (1985) Ways of Coping Questionnaire (WCQ). The WCQ itself was revised from the original Ways of Coping Checklist (WCC) that used a dichotomised response format. The WCQ measures an individual's efforts to cope with a particular stressful event. It is a 66-item self-report measure of the multidimensional strategies people use to manage stressful demands. The response format is a 4-point Likert type scale that ranges from 0 = does not apply and/or not used, to 3 = used a great deal. The WCQ consists of eight subscales, including one problem-focused scale, six emotional-focused scales, and one scale containing a mixture of emotion- and problem-focused items (seeking social support scale). The emotion-focused coping subscales are: wishful thinking, distancing, emphasising, self-blame, tension-reduction, and self-isolation. Scores are calculated by summing the ratings on each subscale to identify how often one uses each type of coping. As early coping measures, the WCC and WCQ have come under criticism from other coping researchers (e.g., Carver et al., 1989; Endler & Parker, 1990; Roger, Jarvis, & Najarian, 1993). For example, Hardy et al. (1996) noted that, for the original factor structure, the 324 completed questionnaires were factor analysed in one analysis. However, these data were obtained from three repeated executions of the scale to the same 108 participants. Other criticisms were addressed

concerning the theoretical basis and the ambiguous wordings (e.g., Carver et al., 1989; Endler & Parker, 1990). Because of the limitations, some new measures have been developed.

Carver et al. (1989) identified several problems with preexisting measures, especially the WCQ. They argued that none of the measures sampled all of the specific domains that they felt to be of theoretical interest. Moreover, the preexisting scales displayed a lack of clear focus in some items, so that ambiguity exists when a single item combines conceptually distinct qualities. Consider one item from the WCQ: "Took a big chance or did something risky." The statement of "doing something risky" in that item may have different implications. It could be interpreted as negative, if the risky acts refer to something like driving recklessly or taking drugs to avoid thinking about the stressor; and it could be perceived to be positive if the word "risky" means taking action that has very little chance to succeed, but if it is successful it would solve the problem. Lastly, Carver et al. noted that the existing scales have been derived empirically rather than theoretically, which they felt was problematic. Due to these problems, Carver et al. developed a multidimensional coping inventory to assess the different ways in which people respond to stress, which was called the COPE. The COPE was developed through the theory-based path, i.e. they used the Lazarus model of stress and a model of behavioural self-regulation as guidelines. The 52-item COPE consists of 13 conceptually distinct scales of coping strategies that are divided into three aspects: five scales measure aspects of problem-focused coping (i.e., active coping, planning, suppression of competing activities, seeking

of instrumental social support, and restraint coping), another five scales measure emotion-focused coping aspects (i.e., seeking of emotional social support, acceptance, positive reinterpretation, denial, and turning to religion), and the remaining three scales measure coping responses that arguably are less adaptive (e.g., behavioural disengagement, mental disengagement, and focus on and venting of emotions). Each scale consists of four items. The COPE was designed to measure coping dispositions or preferred styles that are assumed to remain relatively stable across time and situations. This is differentiated from the WCC, which assesses only situation-specific coping strategies.

Similarly, in response to the many shortcomings in both the WCC and the WCQ, Endler and Parker (1990) constructed the Multidimensional Coping Inventory (MCI). The 44-item MCI has three dimensional factors: task-oriented coping (19 items), emotion-oriented coping (12 items), and avoidance coping (13 items). The validity of the inventory was assessed through two studies. The first study focused on the convergent validity of the MCI by having respondents complete both the MCI and the WCQ. The result revealed that the task-oriented subscale in men and women correlated highly with the problem-focused subscale of the WCQ ($r = .65$ for men, and $r = .68$ for women), and the MCI emotion subscale also correlated highly with the WCQ emotion-focused subscale of wishful thinking ($r = .73$ for men, and $r = .77$ for women) and self-blame ($r = .63$ for men, and $r = .57$ for women). In the second study, the focus was on the criterion validity of the MCI by assessing the relationship between the scale and other measures of state and trait anxiety, depression, Type A behaviour,

neuroticism, and extraversion. The overall results indicated that the pattern of correlations between the MCI subscales and the anxiety and depression measures were as expected. The authors' effort to construct a coping measure with strong psychometric properties seemed to be fruitful.

The MCI, along with extensive clinical experience, inspired Roger et al. (1993) to construct a new scale for measuring coping strategies named the Coping Styles Questionnaire (CSQ). The CSQ includes 60 items representing four factors concerned with problem-solving (Rational Coping, RATCOP, 16 items), emotion (Emotional Coping, EMCOP, 16 items), avoidance (Avoidance Coping, AVCOP, 13 items), and detachment (Detached Coping, DETCOP, 15 items). Detached coping was developed as a new dimension to confirm Roger's previous study which suggested that detachment could be distinguished from task-oriented strategies, as it did not involve attempts to avoid stress. Based on clinical observation, detachment might represent a critical but neglected factor in determining coping effectiveness. Furthermore, the RATCOP and DETCOP subscales were grouped by Roger et al. (1993) as indicative of an adaptive coping style, whereas the EMCOP and AVCOP factors were considered to reflect a maladaptive coping style. The classification of adaptiveness of coping strategies was interesting, but it seems premature at best to claim such coping strategies as adaptive or maladaptive without determining for what situation a strategy is adaptive and for what situation it is not adaptive. Future researchers on coping effectiveness needs to consider these issues. The CSQ can be employed with no inferences made about whether any category of coping strategy is adaptive.

A number of coping researchers also developed measures of coping for specific situations. For example, Madden et al. (1990) modified the WCC to produce a sport-specific measure, particularly for basketball, called the Ways of Coping with Sport (WOCS). The WOCS comprised eight scales of 66 sport-relevant coping stratagems. Hardy et al. (1996) stated that the Madden et al. measure needed to be viewed with caution because only scant psychometric properties were published on it.

Similarly, Crocker (1992) modified the WCC to apply to a recent stressful athletic situation through a multistep process, but he did not develop a new scale. Firstly, he asked 52 competitive athletes and former athletes to write out strategies used to manage athletic stress. Crocker also interviewed eight high performance athletes about how they managed stress in their sport. These responses were then compared to the WCC after being coded into behavioural or cognitive strategies. This information was used to modify several items. Four items were deleted from the WCC, and six new sport-related items were added. The six items are: "I mentally pictured myself handling the situation better," "I remembered to put the needs of the team first," "I trained or practised harder," "I tried to block out negative thoughts," "I took it out on other people not associated with the sport," and "I used supporting self-talk to build-up confidence." A computer package called intelligence program (Rightwriter 2.1) was then used to rate the education level required for understanding the wording. Finally, several items were reworded until a grade five level of education would be required for understanding. The final checklist contained 68 items with a four point Likert

type scale: 1 = not used, 2 = used somewhat, 3 = used much, and 4 = used very much. In using this coping checklist, each athlete was first asked to describe the most stressful situation that occurred in her/his sport in the preceding three weeks. Then, the athlete filled in the coping checklist based upon this situation. Crocker concluded that his revision of the WCC had serious psychometric problems because of a large number of items switching scales as compared to the original WCC.

Recently, Smith, Schutz, Smoll, and Ptacek (1995) developed a multidimensional measure of sport-specific psychological skills that was called the Athletic Coping Skills Inventory-28 (ACSI-28). This scale was created to fulfil the need for measuring psychological coping skills, so that its purposes are to measure individual differences in general psychological coping resources, and to measure specific psychological skills, such as stress management, mental preparation, and control of worry. Through confirmatory factor analysis, that was used as the basis for developing the scale, seven subscales constructed from 28 items were included in the ACSI-28, so that each subscale contains four items. The seven sport-specific subscales are: coping with adversity, peaking under pressure, goal setting/mental preparation, concentration, freedom from worry, confidence and achievement motivation, and coachability. The scale appears to have strong psychometric properties. Furthermore, the scale does not only identify general psychological coping resources (e.g., peaking under pressure, coping with adversity), but also looks at global psychological skills (e.g., goal setting, concentration). The ACSI-28 also has been used as one of the

psychological skills measures to predict performance and survival in professional baseball (Smith & Christensen, 1995). As a sport-specific psychological coping skills inventory, further research involving athletes from different sports and different levels of experience is necessary, but the ACSI-28 appears to have some promise.

In summary, a number of coping measures have been developed with a range from general to situation specific (e.g., academic stress, participation in competitive sport). Yet psychometric problems have still occurred, so that further development of measures and their validation is still required.

Interviews on coping. Another way to discover how people cope with stressful situations is by asking them in an in-depth interview about how they handle stressful situations that have actually occurred (e.g., Gould, Eklund, & Jackson, 1993; Gould, Finch, & Jackson, 1993). For example, Gould, Finch, and Jackson interviewed US national champion figure skaters in an attempt to identify the skaters' strategies in coping with stressful situations in sport. They asked the skaters to read the following definition of coping before the main interview began:

> A coping strategy is any method you use to deal with a stressor to lessen its negative impact. There are many different ways to cope with stress, for example, ignore the stressor, engage in positive self-talk, use relaxation exercises. We want to know the specific methods you used to cope with the stress of being a national champion level skater (p. 455).

Similar to the Scanlan et al. (1991) and Gould, Jackson, and Finch (1993) studies on the sources of stress, after the definition was read, the skaters received further instruction and following their initial responses, relevant issues were explored further, using probes. The instruction was to identify any specific coping strategies used to deal with each of the stressors that had been mentioned in the earlier study (see Gould, Jackson, & Finch, 1993). Standardised probes were also used to ensure that responses from all participants were explored in equal complexity and depth, and to minimise bias in the interview. Again, similar to the stress source studies, an inductive content analysis was applied to the interview responses in the coping study. The original statements concerning coping strategies obtained from the interviews were clustered, and developed into general dimensions of coping strategies. For example, it was found that among strategies cited by the skaters, "rational thinking and self-talk," "positive focus and orientation," and "training hard and smart" coping dimensions were the most commonly used strategies.

Comparing the questionnaire as opposed to the interview technique, some strengths and weaknesses of each approach can be observed. In responding to a coping questionnaire, an individual is faced with a situation that is determined by the researcher. There is a possibility that the individual has never experienced the stressful situation to which coping must be applied, or the specific coping strategies described in the items may be unfamiliar, so that the responses might be misleading. In the course of an interview, usually participants are asked about their stressful experiences, and how they coped with the situation, so, the

participants only report on coping with the stressful situations that they have actually experienced. It is possible to administer coping questionnaires for each stressor that is mentioned by each participant in a stressful situations questionnaire, but as various coping scales contain 28 to 66 items, not only would this be time consuming, it would also be boring, and consequently a biased response may occur. One possibility of conduct a coping questionnaire with different stressors is to modify the coping scale into a short-version. For instance, it could be decided that only the items that have high factor loadings from each coping subscale will be included in the short-version questionnaire. One weakness of the interview method is that participants might not think about or remember certain stressors or ways of coping. A thoroughly developed questionnaire, based on open-ended pilot work and previous research, can also offer participants the great majority of possible stressors or coping strategies, thus, minimising this problem. It should be acknowledged that a range of techniques do exist to minimise the possibility of missed material in interviews. Another advantage of using a questionnaire is that the researchers can quantify the responses and make comparisons of two or more participants or group of participants, while this is very difficult to do by interview due to the subjectiveness of the responses. On the other hand, quantification can conceal the richness and uniqueness of individual ways of coping. In conclusion, if an in-depth understanding of a specific group of people is needed, an interview technique may be appropriate, whereas in situations where the researcher needs to gain more generalisable information

about a population, or to compare different groups a questionnaire is normally required.

Research on Coping with Stress

Folkman and Lazarus (1985) proposed that a "stressful encounter is a dynamic unfolding process, not a static unitary event" (p. 167). Therefore, research on coping must be simultaneously studied with stress (Perlin, 1991). Studies on coping with stressful situations have been conducted in various areas, such as education, physical disabilities, marriage problems, and other stressful encounters in day-to-day life, before coping with stress was studied in sport. Consequently, reviews on coping with these non sport adversities are discussed briefly first, followed by a more detailed review of the research on coping with stress in sport and exercise, particularly research on coping with stress in elite competitive sport.

An early study on coping with stress that has been widely cited was one that was conducted by Folkman and Lazarus (1980). In that study, both emotion-focused and problem-focused coping were used by most middle-aged men and women (98%), thus, less than 2% of them used only one type of coping. In another study (Folkman & Lazarus, 1985), most college students who encountered examination stress also employed both strategies. Stress in examinations might be similar to stress in sport competitions, and seemingly it inspired coping researchers to study coping in sport settings.

Research on Coping with Stress in Sport

Until the late 1980s, there were almost no articles published on coping research in sport psychology (Hardy et al., 1996). Several unpublished pieces of research, however, had been conducted (e.g., Smalt, 1988). Research on coping with stress in sport has usually attempted to identify the coping strategies used by athletes in specific situations (e.g., Finch, 1994; Gould, Eklund, & Jackson, 1993; Gould, Finch, & Jackson, 1993; Madden, Kirkby, & McDonald, 1989; Madden, Summers, Brown, 1990; Rotella, Gansneder, Ojala, & Billing, 1980; Smalt, 1988). It was reported that a situation, which was perceived as stressful by one player, could be perceived as a challenge by another (Madden, et al., 1995; Scanlan et al., 1991). No further information has emerged from research to indicate which athletes perceive situations as challenging and which perceive them as stressful, nor under what conditions the same athlete perceives the situation as stressful or a challenge. Research on coping in sport has involved sport participants from different levels and research with nonelite sport is discussed first.

Research on coping with stress in nonelite sport and exercise. Past research has not only focused on competitive sports (e.g., Madden et al., 1989), but has also involved exercise (e.g., Rostad & Long, 1996) and sport for disabled people (e.g., Bouffard & Crocker, 1992). The purpose of the research in those areas was usually to examine how individuals coped with certain stressful tasks.

Madden et al. (1989) examined coping styles of competitive Australian middle distance runners dealing with a personal slump in performance.

Participants in the study were nine female and 12 male middle distance runners (aged between 14 and 20 years) who were classified as international, national, and state level athlete. The Ways of Coping with Sport (WOCS) questionnaire was administered to the runners to discover how they coped when experiencing a slump in personal competitive form. Seeking social support, increasing effort, and using problem-focused coping were reported as the main strategies used by the runners when they experienced a slump. Interestingly, differences between international level athletes and other groups was significant only for problem-focused coping, with older athletes employing this strategy more often. Unfortunately, Madden et al. did not report whether the mean age of international-level runners was also higher than that of the other groups, so it was not clear whether it was age, level of experience, or both that correlated with the problem-focused strategy.

Following the study with middle distance runners, Madden et al. (1990) conducted another study using the same coping scale. This time 84 male and 49 female basketball players aged between 15 and 44 years ($\underline{M}$ = 24 years) from Victoria, Australia were asked to indicate how they respond when experiencing a slump in personal basketball form. As mentioned previously, Madden et al. also asked the players to identify stressful situations in basketball, and the degree of stressfulness of each stressor experienced. The participants, then, were divided into high, medium, and low stress groups. Results revealed that high stress group players used increased effort and resolve, problem-focused coping, social support seeking, and wishful thinking coping strategies more frequently than their

counterparts with low competitive stress. Hardy et al. (1996) argued that the Madden et al. (1989) and Madden et al. (1990) studies should be viewed with some caution for several reasons. For example, psychometric properties and methodological procedures for the development of the sport specific WOCS were not reported, and much of the evidence was not causal, but correlational.

Crocker and Graham (1995) evaluated patterns of coping strategies, relationships between coping and affect, and gender differences in coping and affect in 235 competitive athletes from different sports. The athletes were asked to describe a recent stressful situation in their sport. Lack of goal attainment was used as a measure of stress. For evaluating coping strategies employed, Crocker and Graham used nine coping scales that were derived from the COPE inventory (Carver et al., 1989), plus three scales (i.e., self blame, increasing effort, wishful thinking) taken from Crocker (1992) and Madden et al. (1990). Results indicated that the main strategies employed by athletes included increasing effort, active coping, planning, suppressing competing activities, and self-blame. Problem-focused coping variables such as active coping, planning, and effort were found to correlate positively to positive affect, whereas negative affect was generally associated with social support variables and emotion-focused coping. In the comparison of female and male athletes, it was found that females used emotional social support and increasing effort to manage goal frustration more than males. The assumption that male athletes should report higher levels of problem-focused coping was not supported. More evidence is still needed to support these gender differences in coping.

Research on coping with stress in elite competitive sport. The term "elite" refers to athletes who pursue excellence in their participation in competitions at the professional or Olympic level. One of the few studies involving high profile elite athletes was conducted by Gould, Eklund, and Jackson (1993), who used an in-depth qualitative interview technique to examine the coping strategies of US Olympic wrestlers.

In the Gould, Eklund, and Jackson study, all 20 athletes of the 1988 US Olympic wrestling team were interviewed extensively via telephone at the period between six and 12 months after the Olympics. They were asked how they tried to cope with adversity from the negative effects of expectations and unforeseen experiences, and what coping strategies they used. Content analysis of the interview data revealed that the wrestlers employed four dimensions of coping strategies. These included: thought control strategies, task focus strategies, emotional control strategies, and behavioural based strategies. Eighty per cent of the wrestlers employed thought control strategies, and this category was the most frequently cited by the wrestlers. The thought control strategies dimension was derived from five higher order themes that included: blocking distractions, perspective-taking, positive thinking, coping thoughts, and prayer. For example, one wrestler talked about the perspective taking strategy in the following way:

> A lot of times I just think about what other people have to deal with. You know, handicapped men or starving men or something like that and just kind of put it into the total perspective. Knowing that, hey, I am doing pretty good over here (Gould, Eklund, & Jackson, 1993, p. 88)

The task focused strategy was considered to reflect efforts to control thought content by the wrestlers on a very limited, specific spectrum. This included narrow, more immediate focus, and concentration on goals. The third dimension, emotional control strategies, reflected wrestlers' efforts to control their feeling state or activation level, and was derived from arousal control and visualisation strategies. Lastly, the behavioural strategies dimension, which was considered to reflect coping efforts characterised by the enactment of overt behavioural responses, emerged from changing or controlling one's environment and following a set routine. The four strategies, though, were not considered to be mutually exclusive. Furthermore, when the medalists were compared to nonmedalists, it was found that the medalists seemed to have their coping strategies so well practised, developed, and internalised that the strategies acted as automatised buffers to adversity. It seems that the automatisation of coping skills should be noted as something to be included in coping skills training programs. Gould, Eklund, and Jackson (1993) also supported Folkman and Lazarus's (1985) notions by observing that the coping efforts of these wrestlers reflected an ever-changing complex process involving multiple strategies, often used simultaneously and in combination. Based on the findings, Gould et al. also suggested that it would be important for future research to identify coping effectiveness, and examine whether coping strategies observed in this study would be evident in other populations.

A similar qualitative study was conducted by Gould, Finch, and Jackson (1993). They interviewed US national champion figure skaters on dealing with

competition stress sources. In this study, similar to the wrestling study, an in-depth telephone interview technique was used, and the interview transcripts were content analysed. The qualitative analyses revealed that at least 40% of the skaters employed general coping dimensions that included: "rational thinking and self-talk," "positive focus and orientation," "social support," "time management and prioritisation," "precompetitive mental preparation and anxiety management," "training hard and smart," "isolation and deflection," and "ignoring the stressor(s)." Gould et al. also found that the skaters used rational thinking most frequently in dealing with stressful situations. It is possible that elite performers face a wider range of stressful situations than club athletes, so that the use of more strategies is necessary. The study also showed that different coping strategies were implemented depending on the specific stressors encountered. These findings were parallel with the Gould, Eklund, and Jackson (1993) study in that the coping efforts used by the athletes were not limited to particular strategies, nor to single approaches to dealing with a particular stressor, but rather, they reflected a complex dynamic process involving a number of strategies, often in combination.

In summary, research findings provide substantial evidence to support the claim that coping is a complex process. More research to reveal coping processes is still needed. Future research also should involve, a greater variety of sports and athletes from different cultural backgrounds to determine whether coping strategies are universal or culturally determined.

Effectiveness of Coping Strategies

Folkman's Coping Effectiveness Models

Folkman (1992) suggested that merely describing coping and developing coping assessments are not sufficient directions for coping research; researchers must be able to understand how coping influences stress in individuals. Theory and research must go beyond describing to also determine whether a strategy is effective or ineffective. The terms coping effectiveness/ineffectiveness have been used interchangeably with the terms adaptive/maladaptive coping. Folkman suggested that in assessing coping effectiveness, we should decide which dependent variable(s) to examine. There are two major approaches: (a) identifying one or more important outcomes, and (b) examining the quality of coping exhibited. These two approaches were explained by Folkman as the outcome model and the goodness-of-fit model, respectively.

The outcome model. The central idea of the outcome model is to assess whether the use of a particular coping strategy is followed by favourable outcomes. If it is, then, the strategy used is considered an effective coping strategy, whereas if the outcomes are unfavourable, then it is considered an ineffective coping strategy. Merely evaluating coping through the outcomes might be misleading. For example, in the case of a junior high school student who used drugs to gain her peers' acceptance, maybe the acceptance did increase her morale. On the other hand the behaviour is likely to create further problems, such as deteriorating health and academic performance. Therefore, a long-term outcome effect must be considered too.

The goodness-of-fit model. Another approach that was suggested by Folkman (1992) in evaluating coping effectiveness is a contextual model that emphasises the process rather than the coping outcomes. The basic assumption of this approach is goodness-of-fit, in which coping quality is judged based on two fits: (a) the fit between reality and appraisal, and (b) the fit between appraisal and coping. The first fit refers to the match of what is actually going on in the person-environment transaction and the person's appraisal of the personal significance of that transaction with his or her options for coping. The second fit refers to the fit between situational appraisals of controllability (secondary appraisal) and actual coping processes. In general, Folkman suggested that problem-focused coping strategies will be most effective in situations where the individual holds the potential for personal control, whereas emotion-focused coping strategies will be most appropriate in encounters where the individual has little control over the recurrence of the stressful situation or its outcome. When one of these domains does not match, that is, the fit is not good, it leads to maladaptive coping. For example, appraising a situation as threatening when it is not can lead to unnecessary coping, whereas failure to appraise a situation as potentially harmful, when such potential exists, means that necessary coping will not be undertaken.

The advantage of the goodness-of-fit model over the outcome model is not only that it avoids some of the problems involved in the selection of salient or pertinent outcomes, but also that it takes the specific situation into account. Unfortunately, as noted by Hardy et al. (1996), the goodness-of fit model is not easy to test, and many coping researchers are still in disagreement over its utility

with some seeing it in a positive manner (e.g., Folkman et al., 1991), whereas others judge it less favourably (e.g., Cox & Ferguson, 1991; Dewe, Cox, & Ferguson, 1993). Considering these two models of coping evaluation, Folkman (1992) suggested that both methods should be used, until we have more experience with each of these approaches. In that way, we could increase our understanding of coping processes by maximising the strengths and minimising the weaknesses of both approaches.

Measures of Coping Effectiveness

The effectiveness of coping strategies usually is assessed through testing the effectiveness of a coping skills training program. Usually, the participants' performance under stress is tested before they start the program, and it is tested again after they have completed the program (pretest and posttest). If their performance after the intervention is better than before they underwent the coping skills program, the coping strategies that they practised are considered to be effective. One of the widely used coping programs, which is also called COPE, but is different to the COPE inventory of Carver et al. (1989), was developed by Anshel (1990). The name COPE is an acronym for controlling emotions (C), organising input (O), planning the subsequent response (P), and executing the appropriate actions (E). The main aim of using the model is to help an individual control stressful situations, so that the COPE focuses on a number of psychological techniques, particularly attentional focus and relaxation.

Research on Coping Effectiveness

Research on coping effectiveness has been conducted through experimentally testing a coping skills training program (e.g., Brown, Anshel, & Brown, 1993; Johnston & McCabe, 1993), during a specific period of time. For example, Brown et al. examined the effectiveness of the COPE model for dealing with the acute stressor of negative verbal feedback following performance on tossing darts. Analyses of variance statistics indicated that the group who received the COPE program was superior in motor performance compared to the other groups (progressive relaxation group and control group). Additionally, the COPE group also reported a decreased muscular tension in contrast to their counterparts. Further research involving competitive sport participants is needed.

Another study that is more sport specific was conducted by Johnston and McCabe (1993) to examine the efficacy of approach and avoidance strategies for coping with stress experienced during sports performance, particularly in a simulated golfing task. The participants were not golfers, but undergraduate female students. There were two tasks that had to be fulfilled: an approach task and an avoidance task. The approach task was to putt 10 golf balls along a shaped path carpet to reach a target hole. This task was designed to be perceived as difficult and as exceeding their performance capabilities. On the avoidance task, the participants were also asked to putt 10 golf balls, but the target hole was constructed so that it would be perceived as easy. It involved putting the balls along the carpet and into the target that was positioned two metres away. Additionally, while the participants were attempting to putt the 10 balls, an

audiorecording of classical music interspersed with sound-effects was played to distract them from the task. Before the trial began, the participants were trained to use one of the coping strategies, either the approach or avoidance strategy. The approach strategy was mental rehearsal, which involved imaging the apparatus, the task to be performed, and the process of successful completion of the task. The participants were instructed to use this strategy before putting and between shots. Meanwhile, other participants were taught the avoidance strategy, in attempting to reduce the influence of distracting stimuli, by focusing on their thumbs as applying an attentional focus strategy.

Johnston and McCabe (1993) used a control group, and this group was taught a relaxation technique. Results showed that the use of an appropriate strategy (e.g., approach strategy for approach task) enhanced perceived capability and improved performance. Finally, Johnston and McCabe suggested that the training and use of an appropriate strategy should be applied because it can lower stress and enhance the performance. Further research is still needed to support this finding, especially for the statement that using an appropriate coping strategy can improve performance. Yet before it is decided for an individual to undergo such a coping skills training program, it seems important first to recognise the effectiveness of coping strategies that are used by the individual.

The question arises on how to examine the effectiveness of coping strategies used in the real life. One possibility is to ask individuals how effective specific strategies were in coping with particular stressors. The individual, therefore, could describe his or her feeling after he or she employed a certain

coping strategy upon a specific stressor. Moreover, which strategy is appropriate for certain people in a specific situation, and how it influences stress might be explored widely.

In summary, several pieces of research to examine the effectiveness of specific coping strategies have been conducted through testing coping skills programs. Results have revealed that the use of appropriate coping strategies improved performance. Yet explanations of how the strategies influence stress still need to be pursued.

Indonesian Research on Coping with Stress

General Research on Coping with Stress in Indonesia

The theory, measurement, and research on stress and coping, which has been reviewed in this chapter, is based on Western cognitive-behavioural traditions. Directly taking such theory and applying it to an Eastern culture would seem premature at best, because it was found that every culture has its own characteristics. For instance, "the Oriental mode of communication is often indirect and implicit, while the Western tends to be direct and explicit (Samovar & Porter, 1991, p. 234)." Nevertheless, a few studies on coping strategies within an Indonesian population using the Western concepts have been conducted in the present decade to specific groups, such as single parents (Mayawati, 1993), night-shift workers (Wulandari, 1990), and pensioners (Suprihatini, 1992). For example, Mayawati studied 51 Indonesian employed and unemployed female single parents, whose husbands had died, and 11 divorced mothers to determine whether they used problem-focused coping or emotion-focused coping in dealing

with stressors. Forms of problem-focused coping included: confrontative coping, planful problem-solving, and seeking social support, whereas emotion-focused coping was reflected in forms of distancing, self-control, accepting responsibility, escape-avoidance, and positive reappraisals. Mayawati translated the Folkman and Lazarus (1985) coping scales into Bahasa Indonesia. Five situations were identified as stressors for this group of women, which included: financial problems, children's condition, loneliness, social life, and practical problems. Results revealed that for both employed and unemployed female single parents, there were no differences in the amount of problem-focused and emotion-focused coping with stressors regarding financial, children-related, and practical problems, whereas in coping with social life problems, both groups used emotion-focused coping more than problem-focused coping. The employed participants also used emotion-focused coping more than problem-focused coping in dealing with loneliness. Forms of emotion-focused coping that were used more often were positive reappraisals, rather than distancing. Mayawati argued that the reason for this might relate to the role of the extended family in Indonesia.

Indonesian Research on Coping with Stress in Sport

As mentioned previously in the section describing research on stress in sport, a cross-cultural study of coping with stress involving Indonesian and Australian team athletes was completed by Hoedaya (1997) during the period of the design and execution of the present study. Hoedaya examined the sources of acute stress in team sports, the use and effectiveness of coping strategies, and the effectiveness of a stress management program. Participants in the study were

Indonesian subelite athletes from five team sports, which included baseball, basketball, field hockey, softball, and volleyball. To identify the coping strategies used, the athletes were requested to tell the interviewers how they usually coped with each stressor that they had mentioned previously. A list of coping responses was obtained from the interviews. The list was later developed to classify the responses based on the Carver et al. (1989) coping strategy dimensions. In Hoedaya's study, the first coping dimension was emotion-focused, which was derived from three coping subscales: acceptance, emotional social support, and denial. The second dimension, problem-focused coping, included active coping and restraint coping. The third coping dimension that he called "less useful strategies," referred to focusing on and venting of emotions.

The coping dimensions, then, were developed to modify the COPE (Carver et al., 1989) questionnaire by selecting several scales that measure strategies which athletes may use to reduce the negative effects of pregame and game acute stressors. The items were developed to reflect sport- and situation-specific content. The modified scales for pregame coping strategies contained 35 items, and the scales for game coping strategies consisted of 45 items. Hoedaya (1997) developed items for the scales based on the combination of modified items from the COPE scale items and items that were newly developed to reflect sport- and situation-specific content. The scales were then translated into Bahasa Indonesia.

Hoedaya (1997) found differences in the use of pregame and game coping strategies among the participants. For example, female athletes in his study

employed "emotional social support" more than male athletes when they encountered a particular stressor. The study also reported that several cultural differences between Australian and Indonesian athletes were revealed in their perception of stressful situations. The Indonesian players reported perceived stressors of: being ignored by a teammate, the quality of play, the importance of a particular game, doubting own performance, and thinking about family problems as more stressful than the Australian players did. Moreover, in order to examine the effectiveness of stress management as a source for alternative coping strategies, Hoedaya administered the Stress Inoculation Training (SIT) that was originated by Meichenbaum (1985) to 24 Indonesian intercollegiate field hockey players. Results showed that these players coped better with particular stressors, such as when a teammate was dismissed from the game, compared to their counterparts who did not practise the SIT. These findings provide more evidence for the value of teaching athletes structured stress management programs. Hoedaya also recommended that future research in sport psychology address cultural specificities with respect to the process of coping with acute stress in sport.

As a summary, research on coping with stress in Indonesia, especially sport-related stress, has just been initiated within the past year. More research in this field is needed, not only to understand how Indonesian athletes cope with stress, but also to gain more understanding of the coping process. Research on coping with stress in sport also should be extended to elite athletes.

The Present Thesis

The review of literature shows that participating in competitive sport often creates stress (e.g., Gould, Jackson, Finch, 1993; Madden, et al., 1990; James & Collins, 1997; Rainey, 1995; Scanlan et al., 1991). Although no literature reported that higher levels of competition will produce greater stress than lower levels, those previous studies indicated that participating in elite level competition does create substantial stress. Accordingly, the present study involved examining the sources of stress experienced by elite athletes, either related or unrelated to sport, what strategies they used to cope with the stressors, and whether those strategies were effective. Considering that the majority of published research on coping with stress in sport has been done in western society, this present study is also intended to extend the research into Eastern society, particularly in the context of Indonesian elite badminton.

Gould, Finch, and Jackson (1993) suggested that future research should be aimed at identifying whether athletes employ the same coping strategies in all stressful situations or whether they use different strategies for different sources of stress. In attempting to answer those questions, this thesis involved investigating the ways of coping of elite badminton players to determine whether they displayed specific coping strategies for handling particular sources of stress. Thus, the main focus of this research was to find out what stressful situations concern players, what coping strategies are predominantly employed to handle each source of stress, and whether the players considered the strategies effective. Working definitions of stress and coping strategy were needed to guide data analysis.

Hence, for the present study, I defined stress and coping strategies by modifying the definitions used in preexisting qualitative research (i.e., Gould, Finch, & Jackson, 1993; Scanlan et al., 1991) so that it would be suitable for badminton. Accordingly, stress was defined as "negative emotions, feelings, and thoughts that a player might have had with respect to his or her badminton experience, and coping strategy referred to "any method the player uses to deal with a stressor in order to lessen its negative impact."

Research on coping with stress in Indonesia (e.g., Hoedaya, 1997; Mayawati, 1993; Suprihatini, 1992) has involved the use of questionnaires (Western based) as the main measures. In the present investigation, I also intended to expand the research on coping with stress into Eastern society but without using questionnaires. Instead, I used interview techniques. This approach was chosen because there is no evidence that people from the Indonesian culture experience stress in the same way as Western people or that they use the same coping strategies. Even if the same strategies are used, they could be applied in coping with different stressors. Another reason for using the interview approach was that it assesses the "richness" of information on stress and coping that could be provided by the Indonesian elite badminton players, that would not be attained by using questionnaires.

Summary

This chapter was a review of the literature on coping with stress. It covered the concepts of stress and coping that were reviewed by stress and coping theorists, such as Selye, Lazarus, and Folkman. Different measures of stress were

discussed, including physiological stress measures, performance tests, self-report questionnaires, and interviews. Research on stress, particularly stress in sport, was then addressed. Questionnaires and interview methods to identify strategies used to cope with stressful situations, especially in sports, were also presented. Consideration of these was followed by research on coping with stress in everyday life, competitive sport situations, and particularly in elite sports. General research on stress and coping in Indonesia, including research on sport, was also described at the end of the chapter. Finally, the purpose of the present thesis was stated, based on the preceding review.

CHAPTER 3: METHOD

Introduction

The review of literature exposed some important factors concerning the theories and research on coping with stressful situations and their implications for sport, such as whether the strategies of coping used by someone under stress were emotion-focused or problem-focused, whether they are influenced by culture, and whether they are affected by gender, sport role, or sport experience. The present investigation examined the sources of stress for Indonesian elite badminton players, the strategies used to cope with the stressors, and the effectiveness of coping strategies using an in-depth interview technique. The rationale for conducting this qualitative study was to explore the players' experiences of stress in detail. Further explanation and rationale for the method used, information about the participants of the study, and the step by step research procedures are addressed in this chapter.

Participants

Indonesian Elite Badminton Players

The participants at the time of this study were Indonesian elite badminton players who were members of the Badminton Association of Indonesia (PBSI). They had all lived at the Indonesian National Badminton Training Centre known as Pelatnas PBSI for several years, had competed internationally, and had accomplished world level performances. Becoming an international badminton

player required extensive training and sacrifices. These players typically began playing competitive badminton before the age of ten in small country clubs. The players in those clubs who were good enough, were usually selected by a talent scout. Then, they were transferred to a bigger club, usually far away from home, and if they had excellent performances they might be chosen to join the national junior team. Their accomplishments on the junior team, then, would determine whether they had the capabilities to become a national senior player. Whenever a player failed to perform well during a certain period of time, the player might be returned to the former club, and lost their status as a national player. If during their training in their original clubs the deselected players demonstrated excellent progress and high achievements, then, it was possible for the players to be called to rejoin the national team.

At the time the present study was conducted, there were more than 70 players, juniors and seniors, registered at the national training centre. For every six or seven players, there was one national coach. The players trained every morning and afternoon Monday through Friday, and had morning sessions only on Saturdays and sometimes on a day in the middle of the week. Each training session usually lasted for about three hours. The players had a week-end break from Saturday afternoon through Sunday night, and returned to training on Monday morning.

The majority of the players stayed in the centre's dormitory, and only the married players were allowed to live outside the complex. The players who lived in and around Jakarta might spend their week-end at home, and the others usually

spent the time in their club dormitory or with relatives. Training activities went on throughout the year, and a player might have approximately five to ten international tournaments a year depending on the player's readiness. A player was given up to a week to rest after competed at a tournament, and up to two weeks break during Christmas to New Year, or Idul Fitri (days when Moslems celebrate the end of a month fasting), if there was not a competition near the holidays.

When the players go to an individual or open tournament, mostly in Asia and Europe, they are accompanied by several coaches, but not necessarily their own coach. Usually, they arrive at the location of the event two or three days before the tournament begins so they have a chance to acclimatise to the surroundings, and get familiar with the tournament court. For a team tournament or a major event, the number of people in a squad increases due to the presence of other team officers, such as the sport psychologist, nutritionist, and other members of the management board. Occasionally in a team event, all the players' coaches are also included in the team. Moreover, the contingent usually spends a longer preparation time on site compared to time spent for individual events, and this can be up to a week before the tournament starts.

At the training centre, almost all the players' needs are met. They are supported with excellent training facilities, badminton equipment, sport clothes, meals, health services, and air conditioned bedrooms. In addition, each player receives a basic monthly allowance from the association. All players also receive stipends from their clubs. Every three months each player may receive contract

money as well from the PBSI's main sponsor. The amount of money that is earned by each player basically depends on the individual's world rank. Also, every time a player goes abroad for a tournament, the player receives a tournament allowance from PBSI. It is also common that an extra allowance from the club is paid when a player attends an international tournament, especially the major ones.

Similar to professional sports, almost all open badminton events provide prize money. An Indonesian shuttler will receive a part of the prize money he or she has won, whereas the other part goes to the Association. For major tournaments, such as the All England or Japan Open, it is common that players receive a bonus if they succeed. If the players achieve well in major team competitions or when they compete for the country, such as at the Thomas and Uber Cup[1], and especially at the Olympics, they are "honoured" not only through money, but sometimes a house, property, or other luxuries. Interestingly, these bonuses are donated not only by the government, but also from badminton fans or business people. Additionally, Olympic medalists are honoured with a service medal from the nation, and are treated as national heroes during the Indonesian Independence Day ceremonies.

Sample Characteristics

The sample for this study was purposefully chosen by selecting "information-rich cases" as proposed by Patton (1990), which refers to "those from which one can learn a great deal about issues of central importance to the

[1] The Thomas Cup is an official world team championship for men, and the Uber Cup is the equivalent for women. Both cups are challenged every two years.

purpose of the research" (p.169). Patton also proposed several methods for purposefully selecting information-rich cases. One common approach for quality assurance is "criterion sampling." Based on this approach, three criteria were stated for this study. At the same time, these defined the term "Indonesian elite badminton player." They included:

1. Speciality of play: singles, doubles, or mixed doubles.

2. Level of accomplishment: qualifier for the 1996 Atlanta Olympic Games, or any player who won a medal at the 1992 Barcelona Olympic Games.

3. Status: member of the 1996 Indonesian National Badminton Training Centre (Pelatnas PBSI).

Under the stated criteria, the "population" or the possible maximum number for this study included 22 players: five men's singles, three ladies' singles, six men's and four ladies' doubles, and two men's and ladies' mixed doubles each. Sixteen players among those who met the sampling criteria (eight male and eight female players) participated in this study. Among the participants, four players were 1992 Olympic medalists, and 14 players were those who qualified for the 1996 Olympics. Only two players among the participants were not going to the Atlanta Olympic Games, both of them, however, won Olympic medals in Barcelona 1992. All participants were still members of the Indonesian national team, and their ages ranged from 17 to 30 years, with a mean of 24.5 years for the females and 26 years for the males.

The participants came from different ethnic backgrounds including Javanese, Sundanese, Menadonese (North Celebest), and Ambonese. Although,

majority of the players had Chinese ancestors, they were born and grown-up in Indonesia, and almost none of them could speak Chinese. Instead, they speak Indonesian dialects. The players' religions were Islam, Catholic, and Christian Protestant.

Statistically, the 16 players in the sample for this study were 73 percent of the population, which consisted of three men's singles (60% of this subgroup), three ladies' singles (100%), three men's doubles (50%), three ladies doubles (75%), two ladies' mixed doubles (100%), and two men's mixed doubles (100%). Ten of the 16 players held first to seventh rank of the International Badminton Federation (IBF) world rankings, and the lowest rank of any participant was sixteenth at the time of data collection. During their careers, all of the participants had reached at least a world rank of eighth, and half of them had experienced being the world's number one. In addition, after this study was undertaken, four among the 14 participants who went to Atlanta had brought home Olympic medals, including gold, silver, and bronze.

Research Design

This study adopted a qualitative methodology, using a face-to-face, in-depth, open-ended interview technique. General research questions focused on players' experiences with stressors and stressful situations in relation to their lives as badminton players, and how they dealt with the stressors. I revised the interview guide in light of the information collected in the first interview, then conducted another interview, and continued to refine the interview process throughout the study. I am a native speaker of Bahasa Indonesia, and was trained

in qualitative research methodology. I conducted all the interviews. Having only one interviewer conduct all of the interviews allowed for consistency across the interviews and reduced the variability that could emerge by using different interviewers (Gould, Finch, & Jackson, 1993). All interviews were tape recorded, and later transcribed verbatim in the original language. The interview transcripts were then translated into English by two bilinguals separately, using a modified committee approach proposed by Brislin, Lonner, & Thorndike (1973). The next step, involved comparing and, if necessary, revising both translation versions to get the closest or the most precise meaning to produce a final translation. Whenever there was something unclear in the translations, I discussed it with either one or both translators. The final translation version was analysed, using the inductive content analysis method recommended by Minichiello, Aroni, Timewell, and Alexander (1995), and Patton (1987, 1990).

Instruments

The instruments in qualitative research are used to help the investigator to access the data at first hand. Instruments used for this study included an interview guide and a demographic questionnaire. As the investigator, I was also an instrument in the sense explained in the following sections.

Interview Guide

An interview guide is used as a tool for the interviewer to ensure that in each interview, the issues of interest were addressed by the participants (Minichiello et al., 1995). In this study, I used an in-depth, open-ended interview technique, therefore, I decided to use the interview guide only as a cue for the

flow of the interview. For that reason, the interview guide contained merely a list of general issues. The order in which the topics were discussed was not determined by me; it depended on the participants' response. For instance, I asked a participant to tell me about stressful situations he or she had experienced. Following each topic, or type of the stressful situations that were mentioned, probing questions were addressed to the participant, ensuring the clarity and richness of the answers. The interviews were conducted in the Indonesian language, therefore, the interview guide was written in Bahasa Indonesia. The interview guide and its English translation are presented in Appendix A.

Demographic Questionnaire

Demographic information about each participant was needed to classify the participants for data analysis. A closed-ended questionnaire contained the participants' age, gender, religion, ethnicity, speciality of play, and the best performance accomplishment. This questionnaire was administered in the Indonesian language. The demographic questionnaire and its English translation are presented in Appendix B.

The Investigator

The investigator in this study, who was also the interviewer, acted as an instrument for data collection. As proposed by Guba and Lincoln (1981), the role of investigator in qualitative research using an open-ended interview is very important, because the investigator at the same time acts as data collector, data analyst, instrument administrator, and data interpreter. For more information on

the investigator as instrument see the section on Credibility, Trustworthiness, and Generalisability in this chapter.

Audiotape Recorder

A new compact audiotape Sanyo M-1800F recorder equipped with voice activated recording system and tape speed control was used to record the interview conversations. To ensure the quality of the recording, new batteries were used for each interview. Two 90-minute cassettes were prepared for each interview.

Procedures

Pre Field-Work Procedure

Prior to the interview data collection, permission was obtained from the Badminton Association of Indonesia, then I developed the interview guide, the demographic questionnaire, and the consent form. I then undertook a pilot study consisting of interviews with ex-athletes.

Getting permission from the Badminton Association of Indonesia. In order to conduct research on badminton in Indonesia, and to get formal access to the shuttlers, I spoke to and sent an official letter to the Vice-President of the Badminton Association of Indonesia (PBSI). Receipt of the letter of approval (see Appendix C) from the PBSI took almost two months. This length of time was necessary, to determine the most appropriate time to interview the players without interfering with their training schedules.

Developing the interview guide. The main purpose of the interview in this study was to discover what stressful situations the shuttlers had experienced as

elite players, how they coped with the stressors, and what did they think about the effectiveness of the coping strategies. The questions in this study covered issues "inside" and "outside" badminton. Inside badminton refers to issues related directly to aspects of badminton performance, such as training and competition, and outside badminton refers to issues not related directly to badminton, such as school and family. The elite players' involvement in badminton were likely to be affected by all aspects of these players' lives, so this distinction is a convenience and not a true dichotomy but it highlights that the focus of the present study is on personal and domestic issues, as well as competition and training in badminton.

The unstructured approach of interviewing (Minichiello et al., 1995) was chosen for conducting in-depth interviews in this study. It refers to "interviews which dispense with formal interview schedules and ordering of questions and rely on the social interaction between the interviewer and informant to elicit information" (p. 65). By employing this approach, the interview process was allowed to be more conversational and relaxed. Minichiello et al. also suggested development of an interview guide to jog the memory of the interviewer about certain issues that should be addressed to the participants. The interview guide in this study, therefore, consisted of a list of general issues that the interviewer wanted to cover. These issues, during the interview, included using probes by the interviewer, using follow-up questions as appropriate, asking about particular situations in the players' lives, inside and outside badminton, that had produced stressful experiences. The interview guide then addressed how the players coped with the situations (followed by its effectiveness), again with follow-up questions,

based on the participants' initial responses where necessary. Care was taken not to "lead" respondents by suggesting particular types of stressors or methods of coping. Therefore, the interview guide in this study was slightly different from interview guides developed by other researchers such as Gould, Finch, and Jackson (1993), Hoedaya (1997), and Scanlan et al. (1991).

Developing the demographic questionnaire. I constructed this questionnaire to investigate the players' demographic background. The questions in this questionnaire were designed with a closed-ended format. They consisted of information on players' age, gender, highest accomplishment, and speciality of play. Considering the variability of ethnic and religious backgrounds in Indonesian culture that might influence the players' coping styles, questions on ethnicity and religion were included as well. It was made clear, however, that players were not obliged to answer these questions. The information on players' best achievement was needed to classify the levels of experience as elite athletes (i.e., "more experienced" and "less experienced" of the elite).

Developing the informed consent form. An informed consent form, signed by the participants was arranged for this study as a prerequisite of involving humans as participants in the research. The consent form contained a brief explanation on the nature of the research, followed by the participant's rights and permission to take part in the study. The consent form (in both languages) is presented in Appendix D.

Pilot study. The pilot interviews were used as trials for my interviewing skills and training with this specific interview schedule. They were also used for

checking the actual questioning process and testing the main interview questions for comprehension and clarity. Four individuals with relevant experience participated as interviewees in this pilot study. The participants who were involved in the pilot study were one Indonesian ex-national athlete (softball), one non-Indonesian competition badminton player who had experienced training in one of the top badminton clubs in Indonesia, and two Indonesian ex-national badminton players. The pilot sample was interviewed using open-ended questions to investigate the players' experiences of stress, situations in which they felt stressed, and strategies for dealing with stressors.

The first pilot interview focused on the interviewing process, and basically was used to enhance my interviewing skills. It was also used to familiarise me with the recording procedure. In this interview, an Indonesian ex-national softball player volunteered to be interviewed. The second interview involved a non-Indonesian badminton player, and it was intended to explore what kind of stressors and coping strategies might be experienced by a badminton player. In the third pilot interview, an Indonesian ex-national badminton player participated. The focus of this trial was similar to the main purpose of the real study, that is, to investigate what situations were perceived as stressful for Indonesian national badminton players, and to examine how they coped with the stressors. The fourth pilot interview was similar to the third one, and involved an ex-Indonesian elite badminton player who was then coaching the national players at the national training centre (NTC). The first three interviews were held in Melbourne, and

conducted either in English or Bahasa Indonesia, whereas the fourth pilot interview was undertaken in Jakarta, using Bahasa Indonesia.

After each pilot interview, I asked for feedback from the participant about the interviewing process, type, clarity, and comprehensibility of questions, style of the interview, and any other issues related to the interview. For example, one participant mentioned that for an introductory question, it would be more comfortable for her to adjust to questions such as: "How long have you been at the NTC?" or "How long have you been playing badminton?" rather than suddenly being asked a question such as: "Can you tell me about the good and bad things of being a national badminton player?" Consequently, in the main interviews such "comfortable" questions were used as an introduction.

Data Collection Procedure

Gaining access to the players. The unofficial approval from the manager and coaches of the Badminton Association of Indonesia (PBSI) to conduct research involving the Indonesian badminton players had been given to me as the investigator when I officially left the Association for study in Australia. During the preparation of the study, contact with the players' manager to arrange suitable times for the players to be interviewed by me had been made through mail, facsimile, and telephone discussion. The official letter of approval from the Vice President of PBSI arrived five weeks before the first day of data collection.

Once I reported my arrival to the players' manager, I was given permission to approach the players individually. Actually, I planned to have an introductory meeting with all players to give a brief explanation on the research

and the interview procedure; unfortunately, according to the team manager and the coaches, it would be difficult to find a perfect time to assemble all the players without interfering with their training programs. For this reason, an individual approach was undertaken.

Setting times for the interviews. The interviews were conducted a month after all the singles and doubles players returned from the 1996 Thomas and Uber Cup tournament in Hong Kong. The Indonesian team successfully won both the world team championships for the second time in a row. Consequently, they had to attend several parades in different cities, and also were invited to be present at other social gatherings. Unfortunately, these celebrations and their commitment within the badminton community took more time than was expected, so some interview schedules were affected. The interview schedule recommenced two weeks before all those in the sample, except the two players not selected, left for the 1996 Atlanta Olympic Games. As is evident, the players had a very strict schedule, returning from the Cup tournaments, social engagements, and preparation for the Olympics.

Data collection began with establishment of contact with each of the players who met the sampling criteria. I used to work with the shuttlers as a psychologist, therefore, the process of developing rapport with the players went relatively easy. The primary purpose of approaching the players individually was to explain briefly the nature of the study and the procedure of the interview, including informing the participant that the interview would be tape recorded. The players were also told that their responses would be kept confidential. Next, the

players were asked to read the informed consent form and encouraged to ask any questions. If the players decided to volunteer to participate in the study, then, a time for an interview was set. The signed consent forms were sealed to assured the confidentiality of the players' identity.

Before setting the interview time, it was planned to interview the participants according to their speciality of play, starting with the female singles players until no more information could be gleaned from them, or "saturation" had been achieved (Minichiello et al., 1995) for that speciality of play. Then, the process started again with the female doubles, until saturation was reached, and this was followed by the female mixed doubles. The same order then applied to the male players. This order was designed to maintain a focus on the participants in each speciality of play. Unfortunately, this planning could not be implemented, due to the limited availability of the players for the interviews. The interviews were, thus, conducted according to each player's availability.

The interview process. Each player was asked to complete the demographic questionnaire before the interview began. Prior to the main interview, I tested the functioning of the recorder, and checked the quality of the respondent's voice. As was suggested by the participant in the pilot interview, I started the interview by asking the player to tell me about the first time they joined the national training centre, followed by questions on any stressful moments that had been experienced either "inside" or "outside" badminton. I consulted the interview guide and the field notes (e.g., list of stressors mentioned by the player) when the player had nothing more to say about the previous topic.

Then, the next question was usually concerned with how the player coped with the aforementioned stressful situation, or asked for clarification about something that the player had mentioned previously (probing or follow-up questions). The effectiveness of each of the strategies the player used to cope with a certain stressor was asked either right after the player mentioned a particular strategy or when the player finished his or her explanation on the strategies they had used. Therefore, the order of questions depended on the flow of the interview.

After the first interview had been conducted, I listened carefully to the tape-recorded data, and took notes to pinpoint the stressors and coping strategies used by the player. The list of the stressors and strategies was written in Bahasa Indonesia for interview reference. Based on the first interview data, the second interview with the other player of the same speciality and gender, was undertaken; and the same procedure applied to the interview data. Whenever it was discovered that at least one new stressor was mentioned by the second player with the same speciality, then, a further interview with another player, still with the same speciality, was undertaken. These steps were continued until no more new stressors were raised by any player from that speciality, unless there were no more possible players who could be interviewed. The same procedure applied to other specialities of play. Unfortunately, two players who previously agreed to take part in the study finally cancelled their participation after failing to appear to several interview appointments. Nevertheless, two other players who also meet the sampling criteria replaced them.

As soon as each interview was completed, I once again checked whether the tape had recorded the interview clearly, then I produced a copy of it. The copy was made as a back up. Then, the recorded interview was replayed and I listened carefully to the whole interview, and went over the field-notes to review the respondent's comments during the interview. By listening to the recorded interview as soon as it was finished, I minimised the possibility of missing data due to poor reproduction of the words on the tape. It was intended to conduct a second interview with each player, in order to check on and clarify the data gathered in the first interview. Due to time constraints, the opportunity to undertake second formal interviews for clarifying the data was applied only to the first three participants sampled. I found that there was little that had been missed or misunderstood in the first three interviews. Probably, my depth of experience with the players supported my capacity to understand their answers. Although I did not undertake a second interview for the other 13 participants, in most cases I double checked with the respondents for clarification on any problematic aspect that arose. This was done by consulting the players in between training sessions or at the end of the afternoon training session. This type of check was deemed to be sufficient, rather than do a second round of interviews with players in the period of their final preparations for the Olympics.

All the interviews were undertaken at the PBSI's training centre complex in East Jakarta. Each of the players chose a suitable place for the interview, either in a player's room, the living room, the badminton hall, or at the centre's terrace. The length of time spent with each player in an interview ranged from 40 to 100

minutes, including the time required to fill-in the demographic form. The interviews lasted between 25 and 80 minutes.

Post Field-Work Procedure

Transcribing the interviews. The raw data of interview studies are verbatim quotations by the participants, therefore full transcriptions of the interviews are essential, to obtain the most desirable data (Patton, 1990). In this study, I transcribed verbatim all the interview data by myself. I consulted the interview notes if something ambiguous was found. The major advantage of typing the interview transcripts myself, as the interviewer, was that I became more familiar with the data (Minichiello et al., 1995).

The transcription process was done as soon as each interview finished. Before I started to transcribe, I replayed the recorded interview at least once again to get familiar with the players' wordings. To make the transcription process easier, a slow speed play back tape was used. If I could not make out a word, I replayed the tape several times at both normal and slow speed. There was an occasion on which I could not make out a word that a player said, but it was solved when I asked someone, with the same ethnicity as the player, to listen to that particular unclear word. Note should be taken that to keep the players' identity confidential, whenever a respondent mentioned someone's name, I did not type it as it was in the transcript, instead a third person or functional word was used. For instance, where players mentioned their partner's name, then in the transcript it would appear as "my partner" or "(he/she mentioned his/her partner's name)." The original interview transcripts (in Indonesian language) consisted of

179 pages of one-and-half spaced text. The full transcripts in Bahasa Indonesia, together with the cassettes, were kept in a locked place to assure the confidentiality of the interviews.

Translating the interviews. As soon as the interview data was transcribed, copies of the transcripts and tapes were sent to two translators who were bilingual in English and Bahasa Indonesia. The identity of the players were covered with ID codes, and each translator signed a consent form acknowledging the confidentiality of the data. Both the translators were unfamiliar with the research topic. The translators' naive background was considered to be necessary to minimise any bias in the translations. The translated transcripts from both versions were then compared to each other and to the original Indonesian transcript by me. Where any differences in meaning between the translations was found, they were discussed with the most appropriate translators or with an English language consultant to decide which translated version was more precise. The third or revised version which consisted of 141 pages of one-and-half spaced text, was used as the main data for the analysis. These English versions were also stored in a locked place.

Data Analysis Procedure

Determining the stressors and the coping strategies. Analysis of the interview data was completed through the following process. Firstly, I extracted or rephrased all statements from the translated interview transcripts which reflected any suggestion of stressful situations. After all statements had been selected from all samples, the second step was to cluster any statements with

similar meaning. Then by looking at the content of the statement in a cluster, I named each cluster with a theme that represented the statements. The outcome of this second step was the raw data themes. The raw data themes were then clustered to develop first order themes. The first order themes, then, were further clustered hierarchically to develop second order themes. The last step was to cluster the higher order themes until no more themes could be clustered together. The results from this last clustering were named the "general dimensions." To determine the coping strategies used by the players, the same procedure was applied to the statements containing coping strategies. The content of the themes and the dimensions are presented in Chapter 4.

Determining the relationships between sources of stress and coping strategies. To determine the relationships between stressors and coping strategies, a table containing columns for stressors and coping strategies was used. In this table, the number of participants who cited each strategy for coping with a particular stressor was recorded. The more participants used the same strategy for the same stressor the stronger the relationship between the stressor and the strategy. The table is presented in Chapter 4.

Determining the effectiveness of coping strategies. Verbatim comments on each coping strategy were analysed to determine the effectiveness of that strategy for coping with a particular stressor. To do this, each of the coping strategy first order themes used by a player to cope with a particular stressor, was determined. Then, the players' statement regarding the effectiveness of that strategy for

coping with that theme was recorded. More detail about this procedure and the results derived from it is presented in Chapter 4.

Developing the Debriefing Sheet

Once the study was completed, a brief report on the general findings was written. Copies of the debriefing report were sent to each of the participating players and the Badminton Association of Indonesia to inform them of the general results and their possible relevance to the training of badminton players. The players were also instructed to contact me if they need further information.

Credibility, Trustworthiness, and Generalisability

The Credibility of the Researcher

Patton (1990) argued that: "The credibility of qualitative inquiry is especially dependent on the credibility of the researcher because the researcher is the instrument of data collection and the centre of the analytic process (p. 461)." Therefore, the use of a human as an instrument can only be meaningful if the human is also trustworthy. Methods to enhance trustworthiness and the quality of a qualitative study in general are discussed briefly in this section based on Minichiello et al. (1995), Denzin and Lincoln (1994), and Patton (1990). Hence, as preparation for this study, I attended a postgraduate course in qualitative research methods, to revise, refresh, and enhance what I had done several years ago as a postgraduate psychology student. As Lincoln and Guba (1985) pointed out:

> One would not expect individuals to function adequately as human instruments without an extensive background of training and experience.

> And their performance can be improved. Luckily, human beings possess another important characteristic - the ability to learn and to profit from experience (pp. 194-195).

Lincoln and Guba also noted that guidance from an experienced mentor can help the human instrument improve considerably. Therefore, a co-supervisor who was qualified in qualitative research was closely involved in the whole interviewing process to guide me in executing the data collection using adequate methods.

In fulfilling some of the characteristics of the human instrument as cited above, Lincoln and Guba (1985) believe that humans can approach a level of trustworthiness similar to that of ordinary standardised tests. As mentioned in the Instruments section, I was both the investigator in this research and I undertook the role of interviewer, so I acted as the instrument. According to Patton (1990), information about the investigator should, thus, be included in the description of the methods. The pertinent background information about myself as the investigator follows. I am a female, Indonesian, a native speaker of Bahasa Indonesia, and 36 years of age when I conducted the study. In sport, I was a former Indonesian national softball pitcher during the period from 1982 to 1989, and during my softball career I participated in two world championships. In softball and baseball I have also been involved in coaching and developing young athletes. In psychology, I was trained in relevant subjects, such as courses in Clinical Case Studies, Research Training in Social Psychology, and Counselling in Educational Psychology. I have practised as a general psychologist in Indonesia since 1987. My own interest and experience in sports as an athlete, coach, and

sport psychology consultant has lead me to be more focused on sport psychology consultancy. Specifically, my personal involvement with mental training has lead me to develop a keen interest in managing stressful situations in competitive sports at various levels. Since 1991 I have been involved as a member of the sport psychology/medical team of the Indonesian squad for various sports, during their preparation for the South East Asia Games, the Asian Games, and the Olympic Games. I also provided consultancy to the national badminton players intensively for more than five years before I took study leave to conduct this research. Therefore, I was not only familiar with the players' lives as Indonesian elite shuttlers, but also familiar with the game of badminton. Furthermore, rapport with the participants developed smoothly, because most of them knew me or knew about me before the study.

Through my intensive work with elite athletes, especially the Indonesian elite badminton players, I decided that using a questionnaire approach for this research would not be appropriate, because the existing questionnaires were devised based on work with western samples, in which of stress and coping might be different than in Indonesian culture. An open-ended, in-depth interview approach permitted the participants to reflect their own experiences of stress and coping, allowing me to examine whether stress and coping in Indonesia correspond to or differ from questionnaire and interview work with western athletes. The availability of interview work with western athletes provides a rich source for comparison, and the richness of the data from the present study is another reason for conducting interviews. Moreover, good rapport with the

respondents had already been developed during my five years as sport psychology consultant with them, hence, by using qualitative research for this study, the respondents might be expected to produce genuine responses that would not be possible to get if the investigator was not trusted by the respondents.

Methods of Establishing Trustworthiness

Denzin (1989), Denzin and Lincoln (1994), Lincoln and Guba (1985), Minichiello et al. (1995), and Patton (1990) have intensively discussed methods of enhancing the quality of analysis such as by the use of thick description, peer debriefing, and triangulation. Thick description and triangulation methods were used in this study to increase the trustworthiness of the findings.

Thick description. According to Patton (1990), the first task in qualitative data analysis is description; and presenting a solid block of descriptive data is often called thick description. In this study, the procedure prior to, during, and after the data collection was reported in sufficient detail.

Triangulation. Triangulation refers to the combination of different methodologies in the study of the same programs or phenomena (Denzin, 1989; Denzin and Lincoln, 1994; Minichiello, et al., 1995; & Patton, 1990). There are four basic types of triangulation: data triangulation, investigator triangulation, theory triangulation, and methodological triangulation. Investigator triangulation, which refers to the use of different evaluators, was used in this study, particularly in the procedure of translation, and in the first part of the data analysis. Interviews in this study were conducted using Bahasa Indonesia, therefore, the translation process is crucial to minimise misinterpretation of data. Two different bilinguals

translated the interview transcripts before the final translation versions were arrived at by me, with agreement from relevant others, such as a third bilingual and an English language consultant. By triangulating translators, the potential bias that comes from a single translator is reduced.

In the data analysis process, an investigator triangulation was applied by involving different persons to carry out the same analysis independently. As well as myself, another independent analyst developed the raw data themes from players' statements that revealed stressors and coping strategies that were selected carefully from the interview transcripts. Both data analysts, then, compared their results and came to consensus on the final categorisation. According to Patton (1990), by using this approach the validity and reliability of the data are more secure.

Generalisability

Generalising the findings of a piece of qualitative research is impossible, due to the small sample size which is usually involved. Also, any sample involves idiosyncrasies of individuals and uniqueness of context that influence the data collected. This study used strict criteria for the sampling technique, which resulted in a group of participants, Indonesian Olympic badminton players, that cannot be even closely matched in any other sample. Cronbach (1975) concluded that social phenomena are context-bound and too variable to permit very significant empirical generalisation. He proposed, however, to give proper weight to local conditions, so any generalisation can be viewed as a working hypothesis, not a conclusion. On the other hand, the term "extrapolation" is offered as

"modest speculations on the likely applicability of findings to other similar situations under similar, but not identical, conditions. Extrapolations are logical, thoughtful, and problem oriented rather than statistical and probabilistic" (Patton, 1990, p. 489). To make data possible to be applied to other similar conditions, it is important that it should be reported in sufficient detail.

Summary

This chapter has been designed to report the methods used in this study. The description of participants was introduced to establish familiarity with the participants' life as Indonesian elite badminton players. Characteristics of the sample and the research design were presented, followed by introducing instruments used for the study. Procedures of the study were described, including prefield-work procedure, data collection procedure, postfield-work procedure, and data analysis procedure. Credibility of the researcher, methods of establishing trustworthiness, and generalisability of the study were also reported. All of this was done in sufficient detail that it demonstrates the thoroughness and appropriateness of the research process.

CHAPTER 4: RESULTS

The results of this study are presented in accordance with each of the study purposes. They were: (a) to identify the sources of stress in relation to the players' lives as Indonesian elite shuttlers, (b) to investigate coping strategies used by the players in dealing with stress, (c) to examine the relationship between the stress sources and particular coping strategies, and (d) to examine the effectiveness of coping strategies used in dealing with specific stressors.

Inductive content analyses were conducted to categorise participants' direct or paraphrased quotations taken from the translated transcripts into more general dimensions. This procedure is explained in the Method chapter. Similar to Gould, Finch, and Jackson (1993), I labeled "raw data themes" for the quotations taken from the transcripts. Next, "first order themes" and "second order themes" were created by clustering like raw data themes into more general categories. Finally, grouping together the like second order themes composed the "general dimensions."

This Results chapter is, thus, divided into four major sections in accordance with the purposes of the study: (a) the sources of stress, (b) the coping strategies, (c) the relationship between the stressors and coping strategies, and (d) the effectiveness of coping strategies used by the Indonesian elite badminton players in relation to particular stressors. Following from that, factors that might

influenced stress and coping such as gender, speciality of play and level of experiences are also discussed in this chapter.

Sources of Stress

The sources of stress were identified by asking the participants about situations they had experienced as stressful. The players' quotations describing situations that caused stress, then, were clustered hierarchically to produce 161 raw data themes, 44 first order themes, 22 second order themes, and finally formed seven general dimensions. The general dimensions of sources of stress encountered by the Indonesian elite badminton players included:

1. Competition stressors
2. Social relationship problems
3. Precompetition stressors
4. Personal life concerns
5. Psychological demands of being an elite shuttler
6. Failure issues
7. Illness and injury concerns

I sorted the stressors' general dimensions from that with the greatest number of raw data themes cited in each dimension to that with the fewest. The complete hierarchical inductive analysis of the sources of stress is presented in Table 4.1. Figures in parentheses show number of participants that identified similar themes. If there is no number in parentheses for a theme, it means that only one participant cited that theme. Each of the seven general dimensions of the sources of stress is now described.

Table 4.1
Hierarchical Development of Sources of Stress General Dimensions

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Having a test game Playing at the Olympics (2) Having an important event (5) Playing in a team tournament (8) Having big events (3)	Important event	Important event	COMPETITION STRESSORS
Afraid that my returning ball will create harm to partner Unsure to execute a chosen stroke correctly	Being hesitant to play a certain stroke	On court tension	
Feeling under pressure (2) Being tense during a match Me or partner making errors (10)	Difficulties during match		
Being dictated by the opponent (2) Not being able to change a game plan (2)	Game plan doesn't work		
At the decisive point When points get tight (2) The points trailing behind the lower rank opponent's points Being caught up when leading (4) Afraid of losing when leading Having score behind the lower rank opponent's score	Tension concerning the game score		
Being provoked by the opponent The opponent purposefully does not want to change the shuttle (2) Being upset by the opponent's attitude The opponent's action	Opponent's negative behaviour	Receiving negative treatment from others during competition	
Being misjudged by the referee or service judge at critical points (2) Being faulted by the service judge or linesmen The linesmen When the referees or linesmen get too outrageous Having different views to line-judge	Referee's biased judging		
Worrying of being booed by the audience (2) Facing noisy, brutal, abusive, wild spectators (5) Spectators (2) Spectators at the team competition	Facing negative spectators		
The unpleasant court condition (2) A draught on the court (2) The air conditioner The lighting (2) The unsuitable speed of the shuttle (2) Playing in the final, at the main court Being watched by so many people	Unpleasant court environment	Unpleasant tournament site	
Feeling uncomfortable playing in snowy weather Playing in a cold weather country (3) The cold court	Playing in cold weather countries		
Going away for a tournament for a long time (2) Travelling far away from home Arriving at the tournament site a while before the game starts (2) Having to manage the food when playing away from home	Playing far away from home for a long time		

(table continues)

Table 4.1. *(continued)*

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Being ignored by partner Being disturbed by own partner Having disagreement with partner (2) Being blamed or told off by partner (4)	Relationship problems with partner	Partnership problems	SOCIAL RELATION-SHIP PROBLEMS
Not feeling comfortable to talk too much on the court Cannot understand the partner's attitude No understanding from partner I did want to talk (to partner) but just didn't	Communication problems with partner		
Telling the partner to do this and do that during a match (2) Partner has a problem Being partnered with a very senior, well reputed player (2)	Partnership problems		
The fussy coach Having disagreement with coach (2) Not get along with coach Coach saying something unacceptable Dealing with the coach during training Not knowing what the coach wanted	Relationship problems with coach	Relationship problems with coach	
Feeling of being treated unfairly by the management (3) Feeling of not being appreciated by the management (3) Being decided that one does not going to a tournament that was promised before	Problems with the management	Relationship problems with the management	
Being criticised by the public Being accused of cheating about age Feeling of hostility from others Being disliked by peers (2) Not having friends	Feeling of being disliked	Relationship problems with others	
The media reported misleading comments about me (4) The media exposing negative reports Reporters (3)	Having negative media exposure	Dealing with media	

(table continues)

Table 4.1. *(continued)*

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Preparing a game plan (2) Facing a tournament (2) Thinking about the coming game (3)	Facing a tournament	Prior to competition	PRECOM-PETITION STRESSORS
The eve of the match (2) Before a match (2) Entering the court (4) In the first set	Prior to and starting a match		
Facing an opponent who has beaten me (3) Facing a stronger or a dreaded opponent (3) Acknowledging that the coming opponent is a good player Afraid of being toyed with and being fooled by the top player opponent Knowing one will play against a particular opponent Facing a tough opponent (4)	Facing stronger or tough opponent	Facing particular types of opponents	
Feeling insecure about playing against a lower or unknown opponent (3)	Facing lower rank or unknown opponent		
Worrying about losing (4) Worrying about losing in the first round	Worrying about losing	Negative thoughts about upcoming match	
Worrying about not meeting requirement to win Afraid of playing badly, cannot perform well Wondering whether I can play as well as the coach expected Wondering if not being able to face the opponent Thinking about winning (2) Afraid of making errors (3) Worrying about what will happen in the game (2) Wondering how well my opponents will play	Worrying thoughts about upcoming match		
Receiving too much input from others Having someone talk to me in a rude way before a game	Others' negative comments before a game		

(table continues)

Table 4.1. *(continued)*

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Personal problems Having problems or quarrels with boyfriend or girlfriend (6) People came claiming to be my relatives	Personal problems	Personal problems and family relationship concerns	PERSONAL LIFE CONCERNS
Worrying bad things will happen to the family (2) Having mom sick Having dad sick Family matters (5) Being asked to stop playing	Family relationship concerns		
Need to support family financially Cannot manage financial affairs (2)	Financial affairs	Financial concerns	
Thinking about my own future (2) I still doubt about my future (3)	Doubt about future life	Future life concerns	
Not certain whether I will get a job after retired (3) Realising that one day you'll stop playing (4) Worrying about not having a happy life	Doubt about life after retired		
Trying to go to school beside playing (2)	Activity outside badminton	Specific personal problems	
Superstitious things	Superstitious things		
Being banned for playing	Specific case		
Feeling of being burdened as number one (3) Feeling of being required to reach the gold (2) Being demanded by public and management to always win (6)	Expectation of being the best	Expectation of success	PSYCHO-LOGICAL DEMANDS OF BEING AN ELITE SHUTTLER
Being expected to win in a team tournament (5) We should not lose to a lower rank opponent Being given a target from the management	Demands to win		
Having unpleasant training program (7) The gruelling physical conditioning Monotonous training (2) Bored or get sick with the routine training (7) Training for months without any tournament (3) Feeling sick and tired of the static, monotony of life at the NTC (2) Getting bored being in the room when playing overseas	Bored with routine training and monotonous life as national player	Experiencing mental fatigue as being a national player	
Feeling that life is so monotonous Having no more goals in life, feeling of having achieved everything Experiencing very high boredom of winning all tournaments Feeling tired of badminton (3) Feelings of not being able to develop myself Feeling bored of having too many tournaments	Experiencing mental fatigue		

(table continues)

Table 4.1. *(continued)*

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
I have trained but I lost (2) Experiencing losing (3) Experiencing losing to a lower rank player (2) Experiencing several losses in a row (3) Experiencing losing in a team game Losing in a major game Making too many unforced errors and losing (3) Always experiencing defeat at the grand finals	Experiencing defeat	Experiencing failure outcomes	FAILURE ISSUES
Playing badly (3) Not getting a good result Cannot reach the target (2) Not being selected for the Olympics or other important events (2)	Failing to reach target		
My rank stuck in a slump Realising that it's not me playing in the final	Experiencing slump		
Afraid of gossip as the effect of losing (2) Having negative comments from people after losing (2) Not getting understanding from others that I was sick	Receiving negative comments on losing	Receiving negative comments on losing	
Being seriously sick Getting sick Recover from illness	Sickness concerns	Physical illness	ILLNESS AND INJURY CONCERNS
Getting injured (5) Getting injured again and again Feeling afraid of getting injured again (3)	Injury concerns	Injury concerns	
The partner is in pain Partner got an injury	Partner gets injured		

Note. Figures in parentheses show the number of participants who cited the theme. No parenthesis means only one participant cited the theme.

Competition Stressors

The competition stressor dimension contains situations related to badminton competition that caused stress to the players. It includes types of event (e.g., individual or team events), any distracting things that happened during the match (e.g., draught, unfavourable speed of the shuttle), others' behaviours related to the match (e.g., booing spectators, errors by playing partner), and any other situations that could create stress during the players' involvement in a competition.

All 16 participants in this study had experienced this dimension of competition stressor. Four second order themes of 45 raw data themes formed this dimension, and this dimension was the most frequently cited by the players. The four second order themes included important event, on court tension, receiving negative treatment from others during competition, and unpleasant tournament site.

Important event. The "important event" was represented by sources of stress such as facing or having a major event, either individual or team, or playing in a decisive match that would influence the player's future career. Five raw data themes were reflected in the interviews by 13 out of 16 players. Quotations condensed into this theme were reflected in sentiments such as the following:

> Most of them when you're playing in a big tournament, especially team competition. You feel more pressured, because your final point counts toward the team's overall score... you want to contribute towards the team's point... you want to perform well. So you try your best, but the

> pressure is so strong... you are afraid you won't perform well. You want to contribute the point so much that you're afraid you'll lose.

Another player that perceived the important event as a source of stress spoke about her feelings when having a test game for the Olympics:

> If I could not beat her, I would not be sent to the Olympics. I was so tensed I felt like a dying person, I could not handle it, I cried, I did not know whom to talk to, because my coach did not come along... I could not sleep because I was so tense. Because it was like a final game, if I lost, I could not go! I think that was very stressful.

On court tension. Fourteen players quoted this theme that arose in 13 raw data themes. The "on court tension" was described as feelings of being under pressure as a result of having "difficulties during a match" (e.g., partner or self making errors), "game plan does not work" (e.g., being dictated by the opponent), "being hesitant to play a certain stroke" (e.g., unsure to execute a certain stroke), and having "tension concerning the game score" (e.g., at the decisive point). The following quote from one of the participants reflected this tension:

> I feel the tension first of all because when I start playing I feel like I am being dictated to by the opponent. As if the opponent controls me all the time, so I make errors. That is the main thing.

Receiving negative treatment from others during competition. The "negative treatment from others" referred to others' behaviours or decisions during a match that affected one's feeling or performance. This theme was derived from 13 raw data themes that classified into opponent's negative

behaviours, referee's biased judging, and facing negative spectators. The following sentiment indicated the source of stress caused by others during competition:

> They [the service judge] like to call out fault. I am annoyed. I felt so stressed...I made a short serve, that was my weapon.... When I did that, they claimed it was a fault. I cried because of that. Very upset.... I just threw the game away....

Ten players among the 16 participants perceived the spectators, especially Indonesian or other Asian spectators, as a factor that could create stress as described in the following manner, "Indonesian audiences are wild. They would humiliate us if we play bad." This player then added, "There are a lot of supporters. My heart beats so fast. I don't want to be humiliated by the opponent." Nevertheless, if the players felt that the crowds were not yelling at them, they would feel better, as indicated by one player: "If it was the opponent being yelled upon, I would feel better, like when playing here. He [the opponent] was the one who would feel uncomfortable." Another player said that noisy supporters distracted his game in the following way:

> You know how they are... and they also jump out of their seats and whatever... it's so different from All England. That's how it is in Asia, including here... especially here, the audience sits so close to the court. If you don't concentrate, you'll lose sight of the shuttle... you get startled easily if you don't fully concentrate... Even if you concentrate, you still can hear them...

"Opponent's negative behaviours" was a category associated with the opponent's behaviours that were perceived as annoying, such as when the opponent purposefully refused to change the shuttle offered by the player.

Unpleasant tournament site. Fourteen raw data themes were quoted by 10 players and formed three first order themes. These first order themes included unpleasant court environment, playing in cold weather, and playing far away from home for a long time. "Unpleasant court environment" indicated that the players felt uncomfortable with the condition of the game court and its environment. The most cited factors that made them uncomfortable were the draught, the court's lighting, and the speed of the shuttle-cock. Unpleasant tournament site also included "playing in cold weather countries" and "playing far away from home for a long time." One player expressed what she felt when playing in a tournament for a long time:

> Take the last one, for instance, it took 17 days while you only played a few times. That was so boring. You don't know what to do if it takes too long. You get there, but you won't get your turn until another 10 days... you'd then get bored. Sure, you can go sight-seeing or shopping, but... what for? Everyday you see the same things, it's boring. You want to play immediately and get it over and done with.

Social Relationship Problems

Problems related to relationships with playing partner, coach, management, and others created stress for the players. All 16 participants in this

study had experienced social relationship problems. Twenty eight raw data themes emerged from the players' quotations.

Partnership problems. The partnership problems included relationships and communication problems with partner. "Relationship problems with partner" referred to problems with playing partner, such as having disagreements, being blamed, being ignored, being disturbed by the partner, and being partnered with a senior reputed player. As one player indicated:

> When I first played doubles, I did feel stressed. You see, my partner at the time was already a very senior player. He's got a very impressive record in doubles, and I was a new kid on the block. Teaming up with him... if I did a mistake, sometimes he told me off. That's the stress.

Another player having similar experience noted, "I was paired with a senior player right from the start, so it made me feel uneasy. I wouldn't dare to correct my partner's mistakes because he's a senior player." A player might feel depressed when his or her playing partner did not support them as was evidenced in this quote: "You've lost, you've performed badly, and your partner wasn't being supportive. It's as if she's blaming me. That's why I was very disappointed."

"Communication problems with partner" referred to feeling uncomfortable in talking to a partner, not being able to understand a partner's attitude, and not receiving understanding from a partner. One player described the problem of communication in the following quotation.

> I'm sometimes confused by my partner, because I often feel he doesn't understand what I mean, but he says "yes." I'm not sure what he means by "yes." Whether it means he understands or not. He's not the talkative type, he doesn't talk much on the court.

Relationship problems with coach. Six players reported having relationship problems with their coaches. This included problems such as having disagreements, not getting along with the coach, the coach saying something unacceptable, and not knowing what the coach wanted. This comment represented the players' problems with their coaches:

> But I didn't dare say it to the coach. That's the only constraint, what I want doesn't always coincide with what the coach wants. It makes me angry with myself...I couldn't bring myself to say it, fearing coach would be offended... although that may not be the case. But sometimes I can't accept what coach tells me to do, so I have this conflict inside. I get upset, and can't fully concentrate on the training.

Relàtionship problems with the management. Five players felt that being treated unfairly and not being appreciated by the management was stressful. For instance, one player said:

> Little things we complain about, like the food menu...those things matter to us. We've already trained hard, but they don't pay attention to us. It makes us think, they only tell us to train hard, but they don't pay attention to us. This way of thinking affects us in training. Sometimes you feel like doing training, sometimes you don't.

Relationship problems with others. Five raw data themes extracted from five players who had relationship problems with others, included feelings of being disliked, and having negative media exposure. "Feelings of being disliked" referred to receiving negative treatment from others, such as being accused of cheating, being criticised, and feeling of hostility and being disliked by peers. One player described it in the following manner, "They were being hostile to me, you know. Ya, they talked about my parents, something like that. They terrorised my family, like that."

"Having negative media exposure" was related to misleading comments or negative reports in the media as written by the reporters. A comment from one player reflected it:

> And then there's this problem with reporters who write inaccurate reports. Sometimes that makes me upset. It's on your mind while you're training. And then, when that particular reporter comes, you think : "Here he comes..." and you can no longer concentrate on your training. That can make you... gosh... especially me, those things bother me. Why did he write like that, when that's not how things really were.

Another player added, "Reporters like to sensationalise. If it's not very important, if they don't ask me, I just keep quiet."

Precompetition Stressors

Precompetition stressors refer to sources of stress experienced when a player is facing a competition or a match. The stress may appear anytime between several weeks before a tournament begin and up to just a few seconds before a

match is going to be played. Twenty six raw data themes were reflected in the interviews of almost all the players (15 out of 16), and formed three second order themes, which were: prior to competition, facing particular opponent or type of opponent, and negative thoughts about upcoming match.

Prior to competition. This theme included facing a tournament, and prior to starting a match. Nine players experienced "prior to competition" as stressful, mostly because they had to prepare a game plan. The following comments illustrated the pressure:

> I guess that's the most stressful. You worry about what you're going to do the next day, who your opponents are, how you're going to play against them... all these things come into mind on the eve of a match.

Another player stated:

> Usually I have a lot of pressure before the match, because there is a lot to think of... Usually it begins in the eve of the match, 24 or 12 hours before. And I don't feel comfortable, nothing is good... I mean, I feel burdened, not free... Sometimes I go to bed, close my eyes, but I cannot sleep.

Symptoms of stress such as sleeping problems, feeling uncomfortable, and other emotional reactions were also reported by several other participants before a game, such as "Wow, sometimes it makes me unable to sleep, unable to do anything. Don't feel like eating, don't feel like anything." Another player said: "Sometimes when you're stressed, everything you do seems wrong. You get easily offended by what people say, because you're stressed out."

Facing particular opponent or type of opponent. This theme emerged when the opponents were considered (by eight players) as either stronger, tough, good, or had beaten the player in their previous meeting(s). One player noted: "Sometimes if the opponent is a top player, I am afraid she will toy with me.... Ya, I am afraid she would make a fool of me, especially if she is a world champion." On the contrary, another player said that: "I would feel afraid playing against... Who is this in the IBF ranking? Who is he? We often wonder...."

Negative thoughts about upcoming match. Twelve raw data themes were formed from eight players in the interviews. The negative thoughts included worrying about losing, worrying thoughts about upcoming match, and receiving negative comments from others before a game. For example, a player said: "Ya, sometimes that makes me wonder, 'Could I?' so I would think about that, 'Oh, I have to win, I have to win. What if I lose, how would it be?"

Personal Life Concerns

All participants reported having the personal life stress source, and this dimension was composed from 18 raw data themes. Sources of stress concerning personal life referred to problems including personal and family relationships, financial, future life, and some specific personal problems.

Personal problems and family relationship concerns. The personal problems were manifested by having problems with a boyfriend or girlfriend, and having other problems not related to badminton. One of the players mentioned that: "I noticed that every time I had a problem, my training was always affected.... The problem may not be much, but it bothers you, it affects you."

Similar to personal problems, family problems also not related to badminton, bothered players' performances. For instance, when two of the players had ill parents, they reported that their training suffered.

Financial concerns. Financial concerns occurred as one of the stress sources in that several players mentioned that they could not manage their financial affairs satisfactorily, and that they needed to support their family financially. One of the players mentioned this matter, "With my money...well, when I'm training here I can't manage my financial affairs." Another player mentioned about his responsibility to take care of his younger brother financially: "...because I come from a moderate family, my family still needs my support and help. Yes, my younger brother needs financial support from me as well."

Future life concerns. The future life concerns included doubt about future life and doubt about life after the player had retired. One of the 12 players who doubted about their future mentioned, "Well, I still worry a bit. Now, I'm also working at a company, but only as a high school graduate. With that status, you don't get paid much... that can be a problem. What about the future?"

Specific personal problems. This second order theme included activity outside badminton, superstitious things, and specific cases. The stress of activity outside badminton was also referred to by the players who tried to go to university beside playing. For example, a player expressed how hard it is to do both things at the same time:

> Wow, exhausting. There is no time. After a tiring practice I had to go to the class. The trip is also very tiring. According to me, for a badminton

> player who practices morning and afternoon, if he wants to pursue his studies, it is possible, however, he needs more time to graduate. If a regular student needs five years, probably a badminton player needs 10 years. So, it becomes impossible.

It should be noted that it is uncommon in Indonesia to pursue a higher education program by studying part-time.

"Superstitious things" were found to be distracting by some players, even if they were not related directly to badminton. For example, a shuttler told me that he received several chain letters, and how this thing disturbed him: "Sometimes it makes me stressed, 'Would I get an accident if I don't respond?' This player also gave another example: "My wife used to love cats. When she was pregnant, immediately I wonder whether our baby would be deformed or handicapped [because of the toxin formed through a cat's fur]."

"Specific case" referred to a special event that was experienced by the player as a trauma or tragedy (in order to keep the player's identity confidential, I cannot describe the tragedy). One player described it, "That [tragedy] was very stressful, but what could I do? I had already joined the NTC, I was already here, so I had to keep on training."

Psychological Demands of Being an Elite Shuttler

Stress caused by the psychological demands of being an elite shuttler occurred when a player encountered situations that related to psychological aspects, such as being expected by others to be successful in an important tournament, or when a player experienced mental fatigue regarding his or her life

as an Indonesian elite badminton player. All of the 16 players reported that this dimension caused stress to them. Nineteen raw data themes were extracted from the players' quotations, and formed two second order themes, that included expectation of success and experiencing mental fatigue as a national player.

Expectation of success. This second order theme was mentioned by 11 players, and was divided into public expectation of being the best, and demands to win. "Expectation of being the best" referred to expectations held by the public or the management that the player would become the world number one, reach the Olympic gold, or always win. It is not surprising that the Indonesian players felt burdened by the public's expectation that they would always win in every tournament. Especially for those players with a world reputation, the public's expectation of the players to achieve the best was felt to be always on their shoulders. For instance, one player described the stress resulting from being expected to be a champion:

> In every tournament we have to win, because we're number one, that's the expectation. We shouldn't lose, especially to a team with lower ranking than ours. But how do we forget that we're number one? That can be distracting... It's not easy, though, because the pressure that you have to win is still there.

Another player had experienced similar, even heavier, pressure from public demands to be the best:

> I felt stressed, because, in every event, I have to, always have to! In a match, I have to win, have to win, have to be the champion, be the

champion, always have to... I make a little error, they won't accept it. If I become number two, to them I have failed.

"Demands to win" in this theme, referred to being expected to win in a team tournament, win against a lower rank opponent, and to reach a target given by the management. One of the players illustrated the stress of being expected to win when playing in a team tournament:

As a team, I think it's because we have to get a team point. In individual competition, it's only my partner and I, team is one group... If we cannot contribute a point, we will look bad to fellow players. I have to contribute a point, one point. In individual competition, if we lost, then it's only us. As a team, it's different, we have to, we have to try our best to win.

Experiencing mental fatigue as being a national player. This second order theme was further broken down into experiencing mental fatigue, and feeling bored with the routine training and monotonous life as a national player. It was encountered by all participants, and projected into 13 raw data themes. "Bored with routine training and monotonous life as a national player" was defined as getting bored, or feeling sick and tired of the static, routine, or unpleasant training programs, and monotony of life at the National Training Centre, or when playing overseas. All of the participants had experienced it at some time. Typical comments occurred about feeling bored with training, such as: "I'd get stressed up here when I'm sick of things, especially when I'm in my room doing nothing. Usually the stress here stems from... all you do is eat, sleep, train, and that's all." Similarly, another player mentioned: "During training, sometimes I am stressed

because of boredom.... Ugh, I feel like I want to go somewhere." Then, this player added, "Sometimes I feel it's monotonous. Gradually, that will make us... can not perform. I feel buried by it, buried, after a while I could not take it anymore, and usually I would fall sick then."

"Experiencing mental fatigue" was defined as feeling tired of badminton and life in general, and having no more goals in life. Indicative of the immense mental fatigue experienced by the players were sentiments such as:

> I lost the game, but I thought, who cares. I once won. Normally, when losing, I felt regretful, why could I lose? But not then, I have won this tournament, so why should I try hard...I have had everything. I have achieved all, what else... what else do I want? Why is life so monotonous?

When experiencing stress like this, it is no surprise, then, that a player seems very depressed, and mentioned a sentiment like "...if I was not strong enough, I might have committed suicide," which was stated by one player.

Failure Issues

Failure issues was a stressor that was contained in 17 raw data themes produced by 15 players. This dimension consisted of two second order themes: experiencing failure outcomes, and receiving negative comments on losing.

Experiencing failure outcomes. The failure outcomes appeared as being defeated, failing to reach the target, and experiencing a slump. All but one participant raised this theme as stressful as expressed in the following quotation:

> Ya, if I lost, I would feel it. Well, if it was a minor game, I would not really feel it. If it was a major game, I would feel it so much. I would feel... uncomfortable. Anything I do, I would not feel right.

Another player added, "If I lost, the sadness would stay for quite some time." Moreover, if the players lost several times in a row, the stress seemed to be heavier as indicated by one player:

> Then my rank dropped drastically. I was under heavy stress. I played with anger, I hated training, I did not feel like training anymore, as if it's finished. I wanted to improve, but it looked like I was defeated again and again.

Receiving negative comments on losing. The effect of losing might influence a player in a worse manner when other people addressed negative comments to the loser. For example, a player illustrated her feeling when receiving unpleasant comments after losing:

> However, if I lose, people would comment about lots of things. I am a type of person that can easily be influenced by what others say... For example, I am already stressed, I am feeling sad, then people say bad things, I would feel more depressed.

Similarly, another player shared his experience when he returns home from a tournament as a loser:

> When I go home, then perhaps meet the board of managers, especially outsiders, everybody asking me in a bad way, "How could you lose? Why

didn't you do this?" All things like that. I get a headache thinking about that myself. I have to think twice if I want to go out."

Illness and Injury Concerns

This final dimension was cited by 10 out of 16 players and accounting for eight raw data themes. It consisted of physical illness and injury concerns.

Physical illness. This second order theme derived from the first order theme "sickness concerns" that referred to getting sick and recovering from illness. One player commented:

> I got sick as soon as we got there. It put pressure on my mind. I got sick before we played. Actually I was already unwell before we went, but I was told to go anyway. And I got really sick when we got there. In my mind I said "what a shame, after coming this far, I had to be sick." I didn't know whether I can make it for the competition.

The stress of being sick did not always disappear when the player returned to his or her health. Coming back from illness, as one player stated, created another worrying thought, "...whether I can still play? If yes, how good will I be?"

Injury concerns. Another source of stress related to physical health was injury, no matter whether it was oneself or one's playing partner who got injured. One participant described her stress when she got injured:

> When your muscle is sprained, even to walk, it hurts. So, I would regret it, why now? When it hurts, I would have a difficult time. And it takes time to heal, maybe, after being massaged, it would be better for a while, but

when you play the next day, it would sprain again, maybe in the second round. So, it's stressful, too.

The Most Stressful Situations

When I asked the players what situation that they experienced as the most stressful, the players stated different stressors. Five out of 16 players reported that the most stressful event for them was playing in an important event, especially a team competition. Apart from that, two players stated that facing a competition, especially when they faced a dreaded opponent, was perceived as the most stressful situation. Two players reported that they felt most stressed when being bored with daily training, while two other players perceived the experience of defeat or being in a slump as more stressful than any other stressors. Another three players reported that things related to their personal life, such as doubt about future life after retirement, and having personal or family problems, as their most stressful situations. Interestingly, one player reported that it was not easy to tell which stressor caused the most stressed, because according to the player the stressors were all related, and influenced other things in life. Another player experienced most stressed when having problems with partner.

Summary of Sources of Stress

In conclusion, seven sources of stress were derived from the players' quotations in interviews. These included: competition stressors, social relationship problems, precompetition stressors, personal life concerns, psychological demands of being an elite shuttler, failure issues, and illness and injury concerns. Additionally, it was found from the interviews that several players realised the

dimensions were not mutually exclusive. Rather they could cumulate, or became intertwined. One player described it "...stress comes from having a problem, right? You keep on thinking about it, and it affects your other affairs in life." Another player mentioned:

> It is difficult to say because they are interrelated. From this to that, that is what makes it hard. If it is one by one, not really [a problem]. However, if they are interrelated, then... like, upset with the management, then lost in a game, of course it would be worse.

Following these findings about sources of stress, a similar technique was applied to determine the strategies used by the Indonesian elite badminton players to cope with each of the seven general dimensions of sources of stress.

Coping Strategies

Coping strategy general dimensions were developed by using the same procedure adopted to produce the general dimensions of sources of stress. Altogether, 326 raw data themes were identified from the responses of the 16 participants, when they were queried about the various methods they employed to cope with stress. Subsequently, these raw data themes were clustered into 72 first order themes and 38 second order themes. Finally, the themes were further abstracted into 14 general dimensions, which included:

1. Social support and relationships
2. Positive thinking and orientation
3. Training hard, preparing and playing smart
4. Personal mental strategies

5. Rational thinking and self-talk

6. Leisure activities

7. Determining solutions to problems

8. Personal physical fitness strategies

9. Detachment

10. Reactive behaviours

11. Religious orientation

12. Isolation

13. Inability to cope

14. Preparing for the future

The complete hierarchical development of coping strategy general dimensions is presented in Table 4.2. Note should be taken that figures in parentheses show the number of participants who cited similar themes, using essentially the same words. When there is no number in parentheses, it shows that the theme was only cited by one participant. The results also demonstrate that most players used more than one strategy to cope with a stressor. As is evidence, the total number of coping strategy dimensions was 14. This outnumbered the seven stress source general dimensions. Each of the coping strategy general dimensions is now delineated, in an order based on presentation of the dimensions with the most frequently cited raw data themes first.

Social Support and Relationships

The social support and relationships general dimension related to the players' efforts to seek out emotional, informational, technical, and social

Table 4.2

The Coping Strategies' Hierarchical Inductive Analysis Themes

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Giving verbal or non verbal support to one another (2) Getting spirited from partner's attitude Backing the partner without telling them to do something (2) Just trust the partner	Verbal and non-verbal support to and from partner	Playing partner support	SOCIAL SUPPORT AND RELATION-SHIPS
Consult partner to change the game plan Discussing the play with partner Evaluating the game together with partner	Discussing play with partner		
Apologising for playing badly Encouraging one another (4) Forgiving each other My partner calmed me down	Encouraging partner and each other		
Telling partner to play normal, safely Reminding partner and each other (5) Showing understanding to partner Sharing the burden with partner Asking partner to back me up Maintaining communication with partner Talk to partner (2)	Maintaining communication with partner		
Asking coach to tell about my weaknesses and my program (2) Being told by coaches and other people to think positively Coach gives us instructions (5) Coach tells my partner to guide me Consulting the coach (8) Talking to the coach (3) Talk to other player Exchanging experiences with senior or ex- players	Support from coach or other players	Coach and badminton people support	
Getting advice from a psychologist Having a psychologist, coach, or some one else beside me (2) Getting input from other people (3) Someone told me to control myself Somebody told me what to do	Support from psychologist or others		
Asking advice from brothers or sisters Encouragement from mom Family, friends and others encouraging me and boosting my spirit Talk to parents Talking it over with someone close Talk to a friend or the room mate Share my feelings with boyfriend and others who are close to me Boyfriend told me to think positively	Support from family, friends, and relevant others	Family and relevant others support	
Having protection by boyfriend and others My family filtering problems when I'm at the tournament Let the partner face the press	Others doing something for my advantage		
Getting support from fellow players (in team game) Getting support from the supporters Believing teammates back me up Feeling supported playing in a team (2)	Having support from public and teammates	Public and teammates support	
Getting along with the younger players, friendly with the environment (2) Socialising with people from different social class	Socialising	Social relationships	

(table continues)

Table 4.2. (*continued*)

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Think positively (6) Changing negative into positive thinking (5) Changing a negative comment into a motivation for myself (2) Taking positive side (2) Positive self-talk (3) Realising that I'm being trusted	Positive thinking about performance and career	Positive thinking	POSITIVE THINKING AND ORIENTATION
I support myself, push myself Forcing myself to go on (2) Encouraging myself not to be humiliated by the opponent Keeping own fighting spirit up (2) Forcing myself to keep on training Having high fighting spirit	Self-encouragement		
Whatever happens, just let it happen Let bygones be bygones; just start all over again (2) Just take it as normal	Just let it happen	Accepting what has happened or been decided	
Not blaming the referee or linesmen Shaking my head, laughing Giving way in order to win It's reporters' job to write It's public's right to talk (2) Just accepting what fans say Accepting the referee's decision (3) Just letting the public talk, not fighting against them	Not arguing		
Trying to accept what has happened (3) Trying to accept the coach's plan We just have to accept the management decision Accepting injury as unavoidable (2) Doing whatever coach sets out for us (3) Accepting the opponent's course for not changing the shuttle (3)	Accepting what has happened or decided		
Learning from mistakes Learning from seniors and others' experiences Learning from experiences (2) Getting used to the games through experiences Getting used to the partner's attitude	Taking advantage from experiences	Taking advantage from experiences	
Believing that achievement can speak Believing in own ability Proving that I cannot be torn down Wanting to break record as the youngest Believing that I have self confidence Gaining confidence from victories	Believe in own ability	Believing own ability	
Realising that if I win, everyone else is happy also I want to win to make them happy Realising that my success will make my mom feel better	Try to win to please others	Pleasing others by winning	

(table continues)

Table 4.2. *(continued)*

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Training hard (4) Training seriously By training Enjoy the training Back to daily training (2) Maintaining and improving my strengths	Training hard and enjoy	Training hard	TRAINING HARD, PREPARING, AND PLAYING SMART
Watching and taking notes of the opponent's game (2) Finding out the opponent's play and weaknesses (5) Watching videos of the opponent (3)	Analysing the opponent's play	Preparing game plan	
Preparing alternative game plan Preparing a game plan refering to my notes Thinking a bit about the coming game, and preparing alternative strategies (2) Thinking about the strategy of play	Preparing strategy of play		
Set new strategy (3) Changing my game plan (2) Changing the strategy Keep thinking during the game (2)	Thinking and changing to alternative game plan	Thinking and changing to alternative game plan	
Glaring at coach or dad in the game (3) Stare at the opponent to make her scared Not ease off our offensive play Avoiding hitting the same way (2) Controlling the circumstances, avoid of being controlled (3) Considering the draught (2)	Applying personal and technical strategies of play	Applying strategies of play	
Not letting the opponent take an easy point from me Persevering to keep the ball in play Just chasing the ball wherever it goes to	Persevering to keep the ball in play	Persevering to play one's best	
Just serve Just do it happily Just do it; no big deal (3) I do not set a target; just play my best Just play, keep on fighting (2) Just try my best (4) Just do not care, just try (2) Just play all out, the best way possible	Just do it, try the best		
Playing safe, not rushing, not hurrying Play defensively Trying not to make errors, just play safely To prevent injury, I'm not forcing myself to chase a difficult ball Just play safely (3) Just make the ball in (2)	Play safely	Playing safe	

(table continues)

Table 4.2. *(continued)*

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Fully concentrating on the game (9) Trying to focus more on the shuttle Just focus on playing, not thinking of the scores (2)	Focused on the game	Centering thoughts	PERSONAL MENTAL STRATEGIES
Focusing thought on the opponent (3) Just focus on the opponent, not the name of the tournament Focusing to control the opponent	Focused to the opponent		
Thinking about myself Reconcentrating	Thinking and refocusing		
The tension disappears once the game starts The tension disappears once we're on the court, concentrating on the game (2) Once the game starts, no more stress Once I play, I don't feel it anymore The problem disappears gradually once I am on the court and start playing Getting confidence once being on the court Once I'm starting training again, the tension gone	Dissipation of stress due to game or training involvement		
Encouraging myself by shouting out loud (2) Hitting own shaking hand Doing little jumping on the court Stay quiet Just take it easy (5) Close my eyes, take a deep breath, jump a bit Take a break, calm down myself (8)	Applying personal relaxation strategies	Personal relaxation strategies	
Taking time to dry up sweating (2) Asking for a break, taking a short walk around the court Changing the shuttle (2) Have a drink (4) Fix my shoes Just walking round and round the court Stopping my opponent's pace Slowing down the game (2)	Slowing down the game's pace		
Doing visualisation (3)	Visualisation	Visualisation	
Not setting too high target Having a target (3)	Goal setting	Goal setting	

(table continues)

Table 4.2. *(continued)*

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Realising that the disappointment cannot heal fast One day I'm only an ordinary person I'm only human who can be defeated	Realising the nature of human life	Recognising the reality of life	RATIONAL THINKING AND SELF TALK
Admitting that the opponent played better Whether it's a big or small tournament, the opponents are basically the same ones (2) Whether I'm stressed or not, I have to play Realising that the opponent is also feeling stressed (2) Win or lose, that's the consequence	Recognising the facts of competition	Recognising the reality of badminton player's life	
All players are trained; get on with it Realising that the opponents also feel the draught (2)	Realising that the opponent is also in the same boat		
Taking all the consequences (2) Realising that it is my task to play and to win the game (2) Acknowledging that being in the NTC is for improving performance Training is my duty	Realising the tasks of being a national player		
Acknowledging that high ranking leads to high contract money Not being hypocritical that I'm here to earn money Keep playing as long as I can earn money Realising that badminton is my job (2)	Acknowledging that playing badminton to earn a living		
I have to start from the beginning (2) Rational self-talk (3) Rational thinking (6) Treating it as an individual event (2) Thinking that not joining training is a loss Take it (making an unforced error or being misjudged by referee) as a risk that has to be taken	Rational thinking and self-talk	Rational thinking and self-talk	
Self-evaluation (2) Self-analysing Correcting my weaknesses Evaluating our performance and keep on training Self-introspection (3) Self-correction (3)	Self-evaluation	Self reference focus	
Control myself (2) Control my temper	Self-control		

(table continues)

Table 4.2. *(continued)*

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Reading books Watching TV Listening to music (2) Finding other activities that can relieve the stress (2) Doing something just for wasting time	Doing activities to release stress	Doing leisure activities	LEISURE ACTIVITIES
Going out (10) Watching movies (11) Eating out (6) Just go have some fun (3) Go fishing (2) Watching the beach goers Sight seeing when playing overseas (2) Seeing places while playing overseas (2) Just going out; forgetting badminton for a while (5)	Going out for amusement		
Chatting with friends (2) Joking around with others, make myself happy (5) Seeing my nieces Having a chat with parents Being together with family	Interacting with favourable people		
Finishing the quarrel right away, on the same day Solving personal problems immediately Trying to solve the problem immediately Discussing the problem 2 or 3 days later Try to solve the problem (3) Resolve it the best I can Make sure problem in the family is solved when I am away	Solving the problem	Finding solutions to problems or conflict	DETERMINING SOLUTIONS TO PROBLEMS
I choose the best strategy, mine or coach's Deciding not going to a tournament if feeling not ready Take time off school for a while to play badminton (3) Deciding to keep playing (2)	Making decision to resolve a conflict		
Tell the coach if the program is not suitable (2) Finding the correct time to talk it out	Speak out		
Having extra training Asking coach to have different program (2) Ensuring quality of training exercises, not quantity Changing partner in training Changing the training environment Jogging outside the tournament building	Modifying training program		

(table continues)

Table 4.2. *(continued)*

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Avoid thinking about the coming game (2) Avoiding negative thinking Not thinking about ranking Not thinking about the losses Not thinking too much about being number one (2) Forgetting that we have won a tournament Not thinking too much about the dreaded opponent Not thinking too much about the problem Trying to forget the problem (3)	Not thinking about stressors	Ignoring	DETACH-MENT
Ignoring (3) Ignoring press during warm-up I don't care what my partner's activities off the court are	Ignoring		
I do not care how many people are watching (2) Just hearing, but not listening Not listening to the crowd, just being in deep concentration (5) Why should I mind about something that's not true Detached personal problems from badminton things	Detach self from negative encounter	Detachment	
Keeping the problem to myself At first, I'm not telling the partner of my feelings of not playing well	Keeping the problem to one self	Emotional isolation	ISOLATION
Just giving general statements, limiting exposure to the press (3) Not encouraging the reporters to ask more questions (2) Just keep quiet, just respond as I please	Limiting exposure to the press		
Staying in bedroom; not going out before the game Isolating myself and coach just before the game	Isolating oneself	Physical isolation	
Keeping distance from reporters and people at social functions (2) Maintaining distance from those who do not know about badminton Keeping distance from distracting people Avoiding the press I have to think twice if I want to go out	Avoiding unfavourable people		

(table continues)

Table 4.2. *(continued)*

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Praying (4) Praying, keep hoping Resigning to God Asking God, leave it to Him Still trying, but leave everything to God Leaving it to God (3) Giving self in to God (2)	Practising religious behaviours	Practising religious life	RELIGIOUS ORIENTATION
Believing that God will always help me, so I'm not afraid God give me this life, I should not complain Accepting as blessing in disguise (2) Wishing a blessing in disguise Thankful that I have more	Religious thinking and belief		
Donates to the ones who need	Religious attitude		
Crying (3) Grumbling (3) Getting upset (6) Disappointed, can't accept I made a mistake (2)	Negative emotions	Reactive behaviours	REACTIVE BEHAVIOURS
Skip unsuitable program Complaining about the unsuitable training program Making excuses to get several days break Just follow suit, just do it recklessly (2)	Reactive behaviours		
Staring at the linesmen until he feels uncomfortable Counter-attack what the opponent did to me Telling the reporter that I cannot accept what he wrote and not to talk to him anymore Warning the reporter not to write misleading comments again (2) Make an appeal or protest	Aggressive behaviours		
Doing nothing Doing nothing; just go round here and there I haven't thought that far (2)	Doing nothing, just let the time go by	Doing nothing	INABILITY TO COPE
Not finding a solution I can't really handle it Having no special effort to handle the dreaded opponent Nothing I can do Just let it pass, cannot handle it Confused, cannot handle the stress I cannot take it any longer	Cannot handle problems	Cannot cope	
Still looking for a way to handle it (2)	Still looking for a way to solve the problem		

(table continues)

Table 4.2. *(continued)*

Raw Data Themes	1st Order Themes	2nd Order Themes	General Dimension
Looking after my own health Stimulating lung and heart close to the real match Wearing something to avoid cold Just wearing jacket during warm-up or training Changing shirt in between sets	Taking care of own physical health	Dealing with illness and injury	PERSONAL PHYSICAL FITNESS STRATEGIES
Having a proper warm-up (2) Preventing the injury Rubbing counter-pain cream to avoid muscle stiffness (2) Having physiotherapy, massage (5) Taking good care of my leg Taking care of the injury (2)	Dealing with and preventing injury		
Having a long, total rest Take a week rest (2) Have some rest (2) Going home, take a rest Staying in bed, try to sleep Stay in bed, even if cannot sleep	Take a rest	Keeping self physically fit for play	
Bring our own food to overseas tournaments	Bring own food overseas		
Preparing myself for the future Building relationships with businessmen for the future Discussing the future life with parents (2) Keep on playing until getting a better job for the future	Preparing self for future	Future career preparation	PREPARING FOR THE FUTURE
Realising that at least I can be a coach Realising that badminton is my life (2)	Badminton for future career		
Saving money for my future (2) Saving for the future life (2)	Saving money for the future	Financial preparation	

Note. Figures in parentheses show the number of participants who cited the theme. No parenthesis means only one participant cited the theme.

assistance from a variety of others, or having others help the players voluntarily. This dimension was mentioned by all participants, and produced the largest number of raw data themes. Forty eight raw data themes were derived from the players' quotations. These formed 10 first order themes and five second order themes. The second order themes included playing partner support, coach and badminton people support, family and relevant others support, public and teammates support, and social relationships.

Playing partner support. This theme was specifically used by doubles and mixed doubles players. All 10 players mentioned that support from their playing partner was used to cope with stress. Support from the playing partner was broken down into verbal and nonverbal support to and from the partner, discussing play with the partner, encouraging the partner and each other, and maintaining communication with the partner. Several players used more than one of these strategies at once. One example of playing partner support was reflected in this comment:

> It doesn't have to be verbal communication... it can be gestures like [he patted the interviewer's back]... even that can mean a lot... what's important is, you communicate. For instance, before you serve, you tell your partner... okay, ready... or something like that. Sometimes you don't have to say anything, you can just make gestures.

Another player stated:

> Sometimes we do have our disagreements, after all you're putting two people together... it's not easy. But, so far we've always been

understanding of each other. Sometimes you can't bring yourself to accept something, but you could still show understanding. When he keeps on making errors, you shouldn't get mad. You give him encouragement. If I make the same errors, he can also give me advice.

Coach and badminton people support. Talking to supportive people such as coach, psychologist, another player, and other people in the badminton environment was acknowledged by 13 out of 16 players as one of their efforts to manage the stress. Support from the coach could be in the form of instruction or consultation. For example, a player stated: "Ya, I talked it over with my coach. I told her [my problem]. Usually the coach would encourage me, she said, OK, that is why I have to prove it [prove to others]." One player reported having support from the psychologist or somebody else: "Particularly if there is a psychologist beside me, a coach, and somebody else who can give me support, it will be more... not as a problem, but I feel much better."

Family and relevant others support. The support from extended family such as parents, brothers or sisters, and boyfriend or girlfriend was important for the players, as well as support from friends or someone else close. It was reflected in this sentiment: "When I felt tense, I spoke to them, so there is someone close to me, beside me, and also my boyfriend is there... I always talk to him, and he always supports me." Similarly, another player mentioned, "And I also need someone I can speak to, I mean sometimes I can not think it over myself; I also need to speak to someone close, someone I can tell about my problems."

Public and teammates support. Three players felt that having support from the public and teammates in a team competition helped them to play more confidently. For instance, one of the players described her feeling of being supported when playing in a team:

> I am more confident playing in a team. Yeah, there are friends who give support in the back. Even though I lose it would be all right. My friends still have a chance to win. I usually play better in a team competition.

Social relationships. Socialising with people from a different social class, and getting along with the younger players and other people around were other ways used by badminton players to lessen their stress. Two raw data themes emerged from three participants who used the social relationships theme as one of their coping strategies.

Positive Thinking and Orientation

This general coping dimension was found to be the second most frequently reported coping strategy used by the Indonesian elite badminton players in this study, with 43 raw data themes. It was characterised by the players' attempts to think, speak, and behave positively toward self, others, and events. Fifteen players cited this strategy to cope with stressors related to being an elite player. This dimension was comprised of five second order themes: positive thinking, accepting what has happened or been decided, taking advantage from experiences, believing in one's own ability, and pleasing others by winning.

Positive thinking. The second order theme of positive thinking was inductively derived from positive thinking about performance and career, and self

encouragement. An excellent example of positive thinking emerged when a player spoke about her stressful experience when feeling the burden that she was always expected to win. She stated:

> But after I think it over, well, maybe because the people trust me.... Well, it is better for me to think positively, it will only be a benefit for myself, I will be motivated then. So I do not think about it as a burden, rather a trust, therefore I should not disappoint them because they give me that trust.

Accepting what has happened or been decided. This second order theme included not arguing with what others' said or decided, and just accepting whatever happens. An example of this theme was given by a player when he dealt with a referee's biased call. He stated, "If the linesman has called it out, just accept it." Another player reacted similarly: "The shuttle-cock was in, clearly in, but the linesman called it out. I only stared at him, laughed at him. Three times he did that to me. I did not get angry, I only laughed, shook my head."

Taking advantage from experiences. It was a theme that referred not only to one's experience, but also to others' experiences, such as this statement mentioned by one player:

> I learned this from my seniors. Some of them still could not accept it. They used to be champions... when entering the outside world (non-badminton), the public do not respect them that much anymore... because they are only ex-champions. And they could not accept it. Learning from that, I try... from now on, while I am still at the peak of my career, I try to

adapt, to prepare myself, so when one day I stop playing, I am not shocked.

Believing own ability. Other second order theme of positive thinking and orientation general dimension was believe in own ability, in which the players perceived themselves as having the ability to achieve something. For example, a player mentioned: "What ever the reasons, I had to play, to prove that I could not be torn down by people."

Pleasing others by winning. This second order theme was derived from three raw data themes that were cited by two players to reflect another way of coping with stress. An excellent example of the theme pleasing others by winning, was given by a player who suffered mental fatigue due to feelings of having achieved everything:

> I saw how delightful it was to win, others also felt the happiness... my mom would be happy, my coach is happy, my boyfriend, all happy, not only myself. After that I thought, I should not be an egoist. While I could, why not make somebody happy?

Training Hard, Preparing and Playing Smart

This dimension was characterised by the players' efforts to train hard, have a good preparation for a game, and play to the best of their ability, using strategies that had been prepared before the event. Fifteen out of 16 players reported using this strategy, and 40 raw data themes emerged from their comments in the interviews. The raw data themes were clustered into eight first order themes, and six second order themes. The second order themes included:

training hard, preparing a game plan, thinking and changing to an alternative game plan, applying strategies of play, persevering to play one's best, and playing safe.

Training hard. Coming back to daily training, or training harder and seriously, but still enjoying it, was one of the players' efforts to ease a particular feeling of stress. One player gave an example of the usefulness of this theme, when he received criticism from his friend. When he met this friend again later, he told him: "Ya, because you said I played bad, and had deteriorated, automatically I trained harder." Another player mentioned a different function of training hard, "Training seriously for a tournament makes you forget how boring training is."

Preparing a game plan. This second order theme was comprised of two first order themes: analysing the opponent's play and preparing a strategy of play. One player described what he did as prevention for getting stressed during a match. He stated, "For example, I am going to face a dreaded opponent.... Maybe by watching his recorded video... I would have an idea of his play and find his weaknesses. Automatically, I will feel better."

Thinking and changing to an alternative game plan. Four raw data themes emerged from four players' transcripts, contributing to this second order theme. These reflected the players' efforts to handle the stress on court by intentionally changing the play to an alternative game plan that had been prepared before the event. One player illustrated how she used this strategy:

> Her weakness is, say, in her rear-line, so I attack her, with my playing style, aiming at her weaknesses. If it does not work, I have to change. I must not wait until I get checkmated. Even if I get points, once she realises my strategy, I have to change it. I have to start thinking, I have to change.

Applying strategies of play. The strategies of play second order theme indicated that the players used personal and technical strategies as their efforts to overcome stress. It included using a concealed strategy to seek help from others during a match, personal ways to control distractions caused by the court's characteristics, and applying technical strategies of play. As an example, one player's strategy was: "Sometimes I get signals from my father, from the coach. Think, think. To be honest, the signals are very helpful...."

Persevering to play one's best. Ten out of the 15 players who reported aspects of this dimension used this strategy when they were under pressure, either in training or in a game. It consisted of 11 raw data themes and two first order themes. This theme was characterised by persevering to keep the shuttle in play, to just do it, and to try one's best. One player told about how she handled the pressure:

> If I am behind, I don't want to give up, I will keep on trying, how do you say it, persevere. I will try to chase and chase, until the game has ended and I still have not lost. I will keep on chasing, trying and trying.

Playing safe. This strategy referred to playing safely in order not to make errors or to prevent oneself from getting injured. It consisted of six raw data

themes, quoted by five players. Two examples of typical comments from these players were: "Just play the shuttle right, in. Play safely, get the shuttle in first." Similarly, "So, we must be careful, do not rush, do not be in a hurry, that's all." Regarding preventing injury, a player said: "....a difficult placement of shuttle, if you couldn't take it, don't force yourself, you might get injured again. Don't! Play it safe. Don't take it."

Personal Mental Strategies

Fifteen out of the 16 players adopted personal mental strategies in dealing with the stress, especially game-related stress. This coping general dimension was characterised by the players' efforts to manage stress by applying specific mental strategies that worked for them. Usually, they learnt the strategy from the coach or others, or from their experience. This dimension was comprised of four second order themes, which included centering thoughts, personal relaxation strategies, visualisation, and goal setting. These accounted for 33 raw data themes.

Centering thoughts. The players used this strategy in order to diminish distracting things or thoughts that could create stress. It derived from four first order themes: staying focused on the game, focusing on the opponent, thinking and refocusing, and dissipation of stress due to game or training involvement. One player's comments reflected how she utilised the focusing strategy.

> The moment I enter the court, my thought is only to the opponent, not the audience. I do not care how many persons are watching and whatever they are saying, I do not want to listen. I fully concentrate on my opponent.

The dissipation of stress often occurs without specific effort from the player. Several players reported getting worried before a match, and this feeling just disappeared at the time they entered the court. For example, a player noted: "Nearing to the match, the problem was still there, but it lessened... until... until I entered the court, the problem decreased."

Personal relaxation strategies. This coping strategy was defined as the players' way to make themselves feel more relaxed, or calm. It could be by applying a breathing technique, slowing down the game's pace, or doing something else. It was not rare that the players used different techniques simultaneously. The following passage that was quoted from one of the 10 players who employed the strategy is a good example: "Then what I will do to overcome that, as I am under pressure, I would slow down the game, by taking a drink, or change the shuttlecock, dry my sweat." The relaxation strategies might combine with the centering thoughts. For example, one player stated:

> "Well, maybe I take a break. Stop playing, refocus.... Well, have a sip, dry myself up. I would usually close my eyes, take a deep breath, then I go back on the court, do some jumps, focus on the court."

Visualisation. In this theme, visualisation meant imagining what shots one was going to play in the coming game, particularly against a specific opponent. It was not used within a structured imagery context. Three players reported that they visualised their play again and again before a match. For example, a player reported: "Before the match I kept on visualizing it. I concentrated a lot. When I played, I could return the ball [shuttlecock] wherever she hit it to...."

Goal setting. Four out of 15 players who used personal mental strategies, employed setting a goal or having a personal target to achieve. It did not have to be targeting a higher goal than a previous performance, but could involve lowering a target. For example, a player discussed goal setting as follows, "Of course I still have a goal to achieve, but not like before. Before, I felt really pressured. So now I don't set my target too high."

Rational Thinking and Self-Talk

This coping dimension was defined as the players' attempts to view the stressors from a logical and realistic perspectives, and focus on what they themselves could control. This dimension was cited by 15 out of the 16 participants, and accounted for 32 raw data themes that were organised into eight first order themes and four second order themes. The second order themes were: recognising the reality of life, realising the reality of a badminton player's life, rational thinking and self-talk, and self-reference focus.

Recognising the reality of life. This theme referred to realising the nature of human life, such as realising that a player is an ordinary person and can be defeated. Following is a statement made by one of the players that indicated the usefulness of the strategy.

> ....after I had been defeated several times, that after all, I am only human. Even in tennis, Steffi [Graf] lost, and I told them that I am like that, too... They [the public] have to understand that, do not ask me too much, because I may not be at the top forever.

Recognising the reality of a badminton player's life. By recognising the reality of a badminton player's life, the players tried to eliminate a range of stressors. It was defined as the players' awareness in recognising the facts of competition, realising that the opponent is also in the same boat, being aware of the tasks of a national player, and acknowledging that one plays badminton to earn a living. The facts of competition referred to the nature of competing, such as recognising that the outcome of a match would be either a win or a loss, and that the competitors in any tournament were basically the same. The players realised that as a national player, it was their task to improve performance, to play, and to win the game, and that they earned a living from it. This second order theme can be evidenced in the following player's quotation: "That sometimes can make you stressed. What we saw was the events, Thomas Cup... Olympics... While in fact it shouldn't. We should just look at the opponents, just like in any other tournaments." The following passage is an excellent example of the theme realising that the opponent is also in the same boat: "It's unlikely that you're the only ones getting the draught... [laugh] so don't blame it on the draught if you lose, after all, surely the opponent gets it too."

Rational thinking and self-talk. Eleven players acknowledged that they used rational thinking and self-talk to eliminate the stress. The nature of this category was shown by such comments as:

> I tell myself, "This chance would not come twice, take it while you still can." I take this as my job, if I perform badly, the result would be bad, if I work well, the result would also be good.

Self-reference focus. Ten among 15 players who used the rational thinking and self-talk dimension employed this strategy. It included self-evaluation and self-control. Self-evaluation covered self-correction, self-introspection, and self-analysis. An example of self-introspection was illustrated by a player as follows: "I also did self-introspection, what my faults were. Maybe I was being arrogant, or what."

Leisure Activities

This coping dimension was employed by 15 out of 16 participants. It was derived from 19 raw data themes, and comprised three first order themes, that included "doing activities to relieve stress", "going out for amusement", and "interacting with favourable people." Various activities that were chosen by the players in order to relieve the stress included: reading books, listening to music, watching TV, and even just doing something to pass the time. It was also found that the players amused themselves by going out, such as to watch movies, to eat out, to go fishing, and sight-seeing, in order to get away from badminton for a while. They usually spent the leisure time with some people they liked such as friends, family, and others who made them happy. It was found that the players often did more than one activity in their leisure time, as was indicated in this quotation:

> For example, by going to the hills, or watching movies. But I rarely go to the cinema, I prefer going to the hills, on weekends. Just to eat out or take a short walk there. Otherwise, I would go out to eat at cafes. Look for places that can reduce this boredom.

Determining Solutions to Problems

This coping dimension was defined as the players' efforts to seek solutions to their problems or conflicts. Nineteen raw data themes emerged from 11 players, who reported this kind of coping dimension in the interviews. These themes, then, were clustered into four first order themes, including: solving the problem, making a decision to resolve conflict, speaking out, and modifying the training program. One of the players illustrated how he solved the problem regarding his training program after losing a match:

> Sometimes we go to two tournaments. So, one more tournament, but I don't even feel like seeing the court. I would prefer jogging, up stairs or outside. A change of environment. Because, I lost here yesterday. To see the court again, doesn't feel good. After this, the training must be hard, the coach will certainly push me, it's better for me to eliminate the boredom by jogging outside.

Personal Physical Fitness Strategies

This coping dimension was cited by 10 out of 16 players, and referred to the players' personal strategies for taking care of their bodies in order to keep physically fit for play, and free from illness and injury. It consisted of 18 raw data themes that were classified into two second order themes that included dealing with illness and injury, and keeping oneself physically fit for play.

Dealing with illness and injury. This theme was divided into the first order themes of taking care of one's own physical health, and dealing with and preventing injuries. An example of taking care of one's physical health was given

by a player when he played in a cold weather country: "Bring something warm in order not to get cold. If we go out, we would sweat, but cold sweat, see. During second set, I have to change my shirt."

Another player mentioned about dealing with and preventing injury: "I would rub counter-pain cream before the game, so that my hands would not be numb." One more example was: "However, I have to be careful, proper warming-up, stretching, before and afterwards."

Keeping oneself physically fit for play. This was a theme that included the players' awareness of the importance of taking a rest and of bringing their own food when playing overseas. For example, a player stated that: "I would try my best to get some sleep. Otherwise, my stamina would drop." Another player added, "... but for competitions [overseas] we are prepared, we bring our own food."

Detachment

Detachment was defined as the players' attempts to cope with stressors by continuing to do what they have to do without reacting to the stressors. Seventeen raw data themes emerged from 12 players' quotations, and were allocated into three first order themes of not thinking about stressors, ignoring, and detaching self from the negative encounter. The first two themes were combined to form an "ignoring" second order theme, and the last theme was labelled "detachment", as a second order theme.

The following quotations indicated how a player used the theme of not thinking about stressors: "I was upset all the time, because I wanted to move

forward, but it looks as if I was stuck. In the end, I handled it by not thinking too much about it." Another player gave evidence of how she detached herself from a negative encounter, when having social relationship problems: "I would hear but not listen to her. Listening would only annoy me, make me upset, right?"

Reactive Behaviours

In this study, the term reactive behaviours has a negative connotation, referring to negative emotions, aggressive behaviours, and other poorly thought-out behaviours that appeared as a reaction to a stressor. Twelve out of 16 players used this strategy as one way to respond to stressors. One form of reactive behaviour involved negative emotions such as grumbling, crying, complaining, and getting upset. There were three raw data themes of crying that were mentioned by the players. Although crying is not always a negative emotion, I classified the three raw data themes of crying as negative emotion due to the context of the cries that was mentioned in the interviews. Other behaviours were more aggressive, for example, this statement from a player who felt she was being misjudged by a linesman: "It would not affect me much, I would stare at him until he felt uncomfortable." Five players who felt dissatisfied with the training program, reacted by making excuses, skipping the training, or they did the training recklessly. One player informed me that his way to cope with an unsuitable training program was: "Ya... I would just follow suit. Do it recklessly, just do it." The coping dimension of reactive behaviours consisted of 13 raw data themes, three first order themes, and one second order theme.

Religious Orientation

This coping dimension was mentioned by nine out of 16 participants from different religions, i.e., Islam and Christian [Catholic and Protestant]. It was derived from 14 raw data themes, and was clustered into three first order themes: practising religious behaviours, religious thinking and belief, and religious attitude.

Practising religious behaviours. This theme included praying and resigning fate to God. For example, a player reported: "Ya, one of my efforts...firstly...the most...outside of badminton, I bestow myself to God, in accordance with my religion. I will not care anymore if anything happens because I already gave myself in."

Religious thinking and belief. It referred to the players' beliefs and thoughts that God will always help them, accepting what has happened as God's will, and hoping or accepting that as a blessing in disguise. One shuttler spoke about how an injury made her change:

> Basically after I got the injury, there were a lot of changes in myself. A lot. Maybe that's what God wanted. There have been a lot of changes, I can play more carefully, much better. I was happy God gave me that [injury].

Religious attitude. This theme referred to such reports as donating to those who are in need. For instance, one player mentioned, "I became more commited to my faith, so I do not merely do my obligations as a Catholic, but I became

more involved. For example, I would help the have nots. So, I get a meaningful life."

Isolation

One of the coping strategy dimensions emerged from the players' comments in the interviews was isolation. This referred to the players' efforts to deal with stressful situations by emotionally or physically isolating themselves from the stressors. Nine out of 16 participants mentioned this dimension, and 12 raw data themes, four first order themes and two second order themes were formed from the players' statements in the interviews.

Physical isolation. This second order theme included isolating self (e.g., isolating self and coach just before a game) and avoiding unfavourable people (e.g., keeping a distance from distracting people at social functions). A case in point, a player described: "I kept a distance, from the reporters, social invitations... I did not attend. So I was not given more pressure."

Emotional isolation. It was divided into keeping the problem to oneself, and limiting exposure to the press. Examples of emotional isolation were: not telling partner about not feeling well enough to play, and just giving general statements to the press. As an example, one player spoke about how he limited exposure to the press: "I only gave information when I am asked, and I answer questions shortly, I don't want to encourage them to ask more questions."

Inability to Cope

The inability to cope, actually is not a form of coping strategy. I included this as one of the coping dimensions because half of the participants reported just

doing nothing on some occasions, stating that they could not handle the problem, and that they were still looking for a way to solve the problem that caused the stress. For instance, one player illustrated his frustration about being in a slump: "For the moment, I can't really handle it. I can't really handle this matter." Another player gave an example that he could not handle the stress when facing a dreaded opponent:

> And sure, before I faced him in the match, I always thought, "Would I dare?" Well, maybe I dared. But once we were on the court and I got a small problem, like he seemed to be able to keep handling the ball [shuttlecock], something like that, then I got confused. There is no... nothing special to hold on to.

There were 11 raw data themes, three first order themes, and two second order themes included in this dimension.

Preparing for the Future

This last coping dimension involved the players' efforts to have something to rely on when the time came for them to retire. It was derived from eight raw data themes, and was cited by nine out of the 16 participants. Two second order themes were composed of three first order themes. These second order themes included future career preparation and financial preparation. The future career preparation theme was formed of two first order themes, that included preparing oneself for the future, and developing other aspects of badminton for the future career. Examples of the players' efforts to prepare for their future were: building relationships with businessmen, preparing oneself to be a coach, saving money,

and letting parents manage one's money. The following quotation was stated by one of the players: "There's no guarantee that when I leave the NTC I'd get a job straight away. That's why I'd better save some money first."

Summary of Coping Strategies

In concluding this section, 14 general coping dimensions were developed from the participants' quotations which indicated their efforts to cope with the stress associated with being an elite player. It was found from the results that most players used more than one coping strategy in dealing with stressors. It is worth examining for what kind of stressors each strategy was applied by the players. For that reason, in the next section, the relationships between each of the general coping dimensions and the seven sources of stress dimensions are reported.

Relationships Between Coping Strategies and Sources of Stress

Having identified the sources of stress and determining the ways players coped with stressors, it was possible to investigate whether particular coping strategies were used to handle specific sources of stress. The relationships between stressors and ways of coping were determined by recording the number of participants who cited each strategy as a way they coped for the particular stress source. The complete analysis of these relationships is presented in Table 4.3. The table illustrates the number of players who reported a particular coping strategy for each stressor, the total number of each general coping dimension cited by the players for that particular strategy, and the total number of stressors that were handled using each strategy. Hence, the most frequently cited coping strategy general dimensions for each stressor were identified.

Table 4.3

Relationships Between Stressors and Coping Strategy General Dimensions Used by Indonesian Elite Badminton Players

STRESSORS / COPING STRATEGIES	Competition stressors (N=16)	Social relationship problems (N=16)	Personal life concerns (N=16)	Psychological demands of being an elite shuttler (N=16)	Pre-competition stressors (N=15)	Failure issues (N=15)	Illness and injury concerns (N=10)	Total coping strategies used
Social support and relationships (N=16)	**12**	9	3	4	3	**8**	2	41
Positive thinking and orientation (N=15)	10	**10**	3	6	3	6	3	41
Training hard, preparing and playing smart (N=15)	10	3	3	6	6	4	5	37
Rational thinking and self-talk (N=15)	7	3	5	4	3	7	2	31
Personal mental strategies (N=15)	**12**	0	4	2	**9**	2	0	29
Detachment (N=12)	7	6	6	3	4	1	0	27
Leisure activities (N=15)	4	2	2	**12**	2	1	1	24
Determining solutions to problems (N=11)	1	4	**10**	4	1	1	0	21
Reactive behaviours (N=12)	6	6	0	3	0	1	2	18
Personal physical fitness strategies (N=10)	4	0	0	0	2	1	**6**	13
Religious orientation (N=9)	2	2	2	3	1	0	3	13
Isolation (N=9)	2	6	1	2	2	0	0	13
Inability to cope (N=8)	3	0	3	2	0	1	0	9
Preparing for the future (N=11)	0	0	9	0	0	0	0	9
Total stressors coped	80	51	51	51	36	33	24	326

Note. Figures in columns show the number of players who used a particular coping strategies for specific stressors.

Table 4.3 shows that there was a cluster of three most frequently cited coping strategies. These were: social support and relationships (41 citations), positive thinking and orientation (41 citations), and training hard and playing smart(37 citations). Following those strategies, another group of three dimensions was also used a lot, which were: rational thinking and self-talk (31 citations), personal mental strategies (29 citations), and detachment (27 citations). The strategies that were cited most for each of the stress source dimensions are now discussed in more detail.

Competition Stressors

This stress source dimension was cited by all participants. Thirteen different coping dimensions were used to cope with this stressor, as seen in Table 4.3. Altogether, 80 citations of the use of those strategies to handle the competition stressors were recorded, and this was the largest number of citations associated with any particular stress dimension. Forty-four out of 80 citations were in reference to four strategies including: personal mental strategies, social support and relationships, positive thinking and orientation, and training hard, preparing, and playing smart.

When the players encountered competition stressors, such as having trouble with the referee or spectators, the two most frequently used coping strategy dimensions were personal mental strategies (e.g., calm oneself down, and focus on the game), and social support and relationships (e.g., support from playing partner). These were used by twelve out of 16 badminton players in this study. The most often used forms of personal mental strategies were centering

thoughts and personal relaxation strategies. Meanwhile, forms of social support and relationships coping strategy in competition were support from playing partner, the coach, and other badminton people.

Ten players employed strategies in the positive thinking and orientation dimension, and another 10 shuttlers used the strategy of training hard, preparing, and playing smart, such as analysing the opponent's play and applying strategies of play, in order to cope with competition stressors. Strategies from the rational thinking, detachment, and reactive behaviours coping dimensions were also used by a noteworthy number of players. It made sense that no one used the preparing for the future as a strategy to cope with present competition stressors.

Social Relationship Problems

All 16 participants reported that they had experienced problems with social relationships, and 51 citations were quoted by them regarding the strategies used to cope with social relationship problems. There was a cluster of two strategies that were used by the largest numbers of these players. They were: the positive thinking and orientation (used by 10 out of 16 players), and social support and relationships (nine citations). The players employed both the positive thinking and social support strategies when they had a problem either with their partner, the coach, the management, or with other people. Detachment coping, involving strategies such as not thinking about the stressor, was employed by six players when they had relationship problems, and six also engaged in reactive behaviours like grumbling and crying. Another six players used isolation strategies to cope with relationship problems. The remaining 14 citations referred

to the use of another five different strategies, i.e., training hard, preparing, and playing smart; rational thinking and self-talk; leisure activities; determining solutions to problems; and religious orientation; while four strategies were not used at all.

Personal Life Concerns

From 51 citations regarding a range of strategies used to cope with personal life concerns that were cited by 15 players, the largest number of citations were clustered on three coping dimensions. These were: determining solutions to problems (10 citations), preparing for the future (nine citations), and detachment (six citations). The determining solutions to problems category, such as solving the problems immediately, was the most frequently used coping strategy when players encountered a personal life concerns stress source. It does not seem surprising that the preparing for the future strategy was exclusively used only for coping with this stressor dimension, especially when players had doubts about their future life after their retirement from elite badminton competition. Only two dimensions of coping strategy were not represented in stories about handling personal life concerns, that is, reactive behaviours and personal physical fitness strategies.

Psychological Demands of Being an Elite Shuttler

Twelve out of 16 players tempered the psychological demands stressor, when it referred to being bored with the routine training and the monotonous life of a national player, by doing leisure activities, such as watching movies or going out with friends. When the demands appeared as expectation of success, the two

most common strategies came from the positive thinking and orientation, and the training hard, preparing, and playing smart coping dimensions. The other coping strategies were also used to cope with this stressor, except those in the dimensions of personal physical fitness and preparing for the future, which were not applied at all to cope with psychological demands of being an elite badminton player.

Precompetition Stressors

Similar to competition stressors, these stressors were mostly coped with using personal mental strategies. Nine out of 15 players used strategies such as visualisation and dissipation of stress due to game involvement. Six citations referred to the training hard, preparing, and playing smart, using strategies like preparing a strategy of play when they were faced with precompetition stressors. The strategy of detachment (e.g., ignoring) was also used by four players to eliminate precompetition stressors. Two categories of coping, i.e., reactive behaviours and preparing for the future, were not used at all, and no players mentioned that they could not cope with this stressor.

Failure Issues

Stress caused by failure issues, such as experiencing defeat or failing to reach one's target, was mostly tempered through social support and relationships, like encouragement from the coach and one's family to do better in the future. From 33 citations of strategies used by 15 players in association with failure issues, eight players mentioned social support and relationships, such as consulting the coach, as their strategy to cope with this stressor. Seven players used rational thinking and self-talk when faced with the same stressors, and

another six players employed thinking positively toward the stress source. Overall, this stress source dimension was coped with through 11 different coping strategy dimensions, while three dimensions of coping were not used at all.

Illness and Injury Concerns

Six out of 10 players who reported illness and injury as one of their sources of stress used the personal physical fitness strategy, such as dealing with and preventing injury, to overcome the problem. That strategy was the most widely used to cope with illness and injury concerns, followed by the coping dimension of training hard, preparing, and playing smart, that was cited by five players. For instance one player mentioned that he trained harder after recovered from illness. Other strategies, such as social support, positive and rational thinking, praying, reactive behaviours, and doing leisure activities, were also used by a few players when they had illness and injury problems.

Summary of the Frequency of Application of Each Coping Strategy

As shown by Table 4.3, different strategies were used for different stressors; some strategies were widely used, whereas others were more focused. For instance, the two general dimensions of social support and relationships, and positive thinking and orientation, were the most widely used coping strategies to deal with all seven sources of stress, followed by training hard, preparing, and playing smart. On the other hand, a strategy such as reactive behaviour was mainly employed for social relationship problems and competition stressors, and the personal physical fitness strategy was used solely for illness and injury concerns, and, to a lesser extent, competition stressors. Another different pattern

emerged for the religious orientation coping dimension. The use of religion for coping occurred with almost all the stressors excluding failure issues, however, not more than three citations were associated with each stressor.

In addition to identifying general patterns in the relationships between coping strategies and sources of stress, it was clearly demonstrated that different players used different strategies in their efforts to cope with the range of stressors that they experienced. Furthermore, some players used a particular strategy to handle more than one stressor, and one stressor could be coped with by more than one strategy either separately or simultanously. Overall, there were several strategies, each of which was widely used to handle a range of stressors, whereas some strategies were much more focused to coping with particular stressors.

The Effectiveness of Coping Strategies

The relationship between coping strategies and stress source general dimensions was discussed in the previous section. Although this suggested that strategy use was selective, no evidence was presented in that section indicating whether the strategies used by the players were effective or not. In this study, effectiveness was defined as the success of a particular coping strategy used by players, in overcoming or diminishing a particular stressor. A strategy was labelled effective, if, after the player used the particular strategy, he or she no longer felt the stress, or at least felt that the stress level was reduced.

In order to discover which strategies were effective, I analysed the transcripts of all 16 players for statements about the effectiveness of each coping strategy associated with a particular source of stress. I analysed effectiveness at

the level of first order themes. I assumed that the first order themes were representative for analysing the coping effectiveness. I associated each player's first order theme for a stressor with the player's citation of a particular coping strategy, then, analysed the player's statements regarding the effectiveness of that coping strategy for managing that stressor. In many cases, a player referred to the effectiveness of several strategies in one statement or sentence. Next, I summarised all the players' effectiveness analyses into a table. An example from one player of these analyses is presented in Table 4.4. To keep the players' identity confidential, the complete table of 72 pages has been retained by the researcher.

The following quotations are presented as examples of statements made by several players to indicate that the strategies were effective:

"So, I didn't feel the burden was completely on me,"

"... for me it's better, I feel supported,"

"my mind is clear, not confused,"

"... so that I could handle that,"

"That would not affect me too much,"

"After that, I didn't think about anything," and

"Once the game started, I didn't think about it anymore."

Examples of ineffective coping strategies according to several players who used them were manifested through statements including:

"Well, a little bit [affected]. It's not easy,"

"That's hard. That may cause me to make errors,"

Table 4.4
Example of Coping Strategy Effectiveness Analysis on Competition Stressors General Dimension

Sources of Stress	Coping Strategies	Statements of Effectiveness	P	N	S	N/A
Important event	Dissipation of stress due to game or training involvement	....it would disappear by itself	X			
Game plan does not work	Applying personal and technical strategies of play	....sometimes it would not work			X	
Facing negative spectators	Focused on the game	Even if you concentrate, you still can hear them... no matter how hard you try, it's still hard to concentrate.		X		
Difficulties during match	Self-encouragement	-				X
Difficulties during match	Rational thinking and self-talk	But it's easier said than done... very difficult to implement		X		
Playing far away from home for a long time	Doing activities to relieve stress	... but if we did it everyday, we got bored too....			X	
Important event	Interacting with favourable people	... so that I can overcome the tension	X			

Notes: P = Positive or effective
N = Negative or not effective
S = Sometimes effective, sometimes not
N/A = Does not say whether it is effective or not

"... Our coach also gives us instruction on the court, but that could make me confused,"

"I don't feel comfortable, ...wanted to play immediately,"

"... actually I have not found a solution for this matter," and

"It's not easy to forget it, but I try very hard to do so."

Some players reported that particular strategies sometimes worked, and sometimes did not. Statements including the following were taken as evidence:

"Sometimes I can overcome this,"

"... just accept it. Except if it is too outrageous,"

"... but if we did it everyday, we got bored, too,"

"Sometimes could not... and... get lost all the time,"

"Can be solved if they understand," and

"If the burden is too heavy, taking my own decision would be confusing."

In general, from the complete effectiveness analyses of first order themes, it was found that a total of 410 citations, around 80%, were mentioned by the players to indicate that the coping strategies used were effective, 42 citations (around 8%) indicated that the strategies were not effective, and 36 (around 7%) citations indicated them as sometimes effective sometimes not effective. Additionally, it was found that among the 513 citations related to coping strategies employed by the players, there were 25 coping strategy statements (around 5%) that had no information about their effectiveness. This means that, on these occasions, the players only reported that they used a particular strategy, but did not comment on the outcome of using that strategy.

Finally, I transformed the coping effectiveness results that were derived from first order themes, into general dimensions. Results of the effectiveness of the most frequently cited coping strategies associated with particular sources of stress dimensions can be seen in Table 4.5. Note should be taken that the number of players who cited each of the effectiveness statements in the Table 4.5 were obtained from coping strategy first order themes. The results indicated that one particular kind of a coping strategy dimension for a specific stressor general dimension could have different levels of effectiveness, that is, it could be effective, sometimes effective, and not effective, in different circumstances or for different players. Moreover, one player might have cited more than one first order theme in one general dimension, consequently, the frequencies of cited effectiveness were greater than the number of participants who cited the particular general coping strategy. As the majority of strategies used were effective, the focus in this section is more on the strategies that were not effective to overcome the stressors.

The social support and relationships dimension, such as support from partner, coach, psychologist, family, and others, was effective to cope with the majority of competition stressors and failure issues. Nevertheless, one player reported the input from the coach that was given during a game had confused him, and another player stated that however strongly the relevant others supported her, she still felt disappointed about her failure. Communication with a partner during a match also did not work, if both players were tense.

Table 4.5

The Effectiveness of the Most Frequently Cited Coping Strategy General Dimensions Associated with Particular Sources of Stress General Dimensions

Sources of Stress General Dimensions	Coping Strategy General Dimensions	N	Coping Effectiveness			
			Positive	Negative	Sometimes	N/A
Competition stressors (N= 16; RDT= 45)	Social support and relationships	12	24	3	2	1
	Personal mental strategies	12	27	2	1	-
	Positive thinking and orientation	10	16	-	3	-
	Training hard, preparing, and playing smart	10	23	-	5	-
	Rational thinking and self-talk	7	4	2	2	1
	Detachment	7	7	2	1	-
	Reactive behaviours	6	5	3	1	-
	Leisure activities	4	4	-	2	-
	Personal physical fitness strategies	4	4	1	-	1
Social relationship problems (N=16; RDT= 28)	Positive thinking and orientation	10	14	1	1	2
	Social supports and relationships	9	13	1	-	1
	Detachment	6	4	-	1	-
	Reactive behaviours	6	3	2	2	-
	Isolation	6	5	-	1	-
	Determining solutions to problems	4	4	-	-	-
Pre competition stressors (N= 15; RDT= 26)	Personal mental strategies	9	20	-	-	2
	Training hard, preparing and playing smart	6	15	1	3	3
	Detachment	4	5	2	-	1
	Positive thinking and orientation	3	8	-	-	-
	Rational thinking and self-talk	3	4	-	-	1
Personal life concerns (N= 16; RDT= 19)	Preparing for the future	10	10	-	-	-
	Determining solutions to problems	10	13	-	1	-
	Detachment	6	4	1	1	-
	Rational thinking and self-talk	5	4	-	-	-
	Personal mental strategies	4	4	-	-	-
	Positive thinking and orientation	3	3	-	-	-
	Training hard, preparing, and playing smart	3	1	-	-	2
	Social support and relationships	3	7	-	-	-
Psychological demands of being an elite shuttler (N= 16; RDT= 18)	Leisure activities	12	21	-	-	1
	Positive thinking and orientation	6	8	-	-	-
	Training hard, preparing, and playing smart	6	6	-	-	-
	Social support and relationships	4	9	-	-	-
	Rational thinking and self-talk	4	5	-	-	-
	Determining solutions to problems	4	5	-	1	-
	Detachment	3	3	2	-	-
	Reactive behaviours	3	2	-	-	1
	Religious orientation	3	4	-	-	-
Failure issues (N=15; RDT= 17)	Social support and relationships	8	11	2	-	-
	Rational thinking and self-talk	7	8	2	2	-
	Positive thinking and orientation	6	7	3	-	-
	Training hard, preparing and playing smart	4	4	2	-	-
Illness and injury concerns (N=10; RDT= 8)	Personal physical fitness strategies	6	6	3	-	-
	Training hard, preparing and playing smart	5	3	1	1	1
	Positive thinking and orientation	3	3	-	-	-
	Religious orientation	3	1	-	-	2
Total for the most frequently cited			270	35	31	20
Overall effectiveness coping strategies cited			410	42	36	25

Notes. RDT means the number of raw data themes cited by N players for each stressors dimension

N/A means that no citations referred to the effectiveness of the strategy used by the players.

The positive thinking and orientation coping strategy was almost always effective for dealing with stress, except when the players perceived that they were being treated unfairly by the management, and when they experienced big failures. The coping strategy of training hard, preparing, and playing smart was mostly used effectively for precompetition and competition stressors. Yet some players reported that on some occasions it was not effective. For instance, even though the players had applied personal and technical strategies of play, still they could not handle the pressure.

The effectiveness of the personal mental strategies coping dimension was the most frequent positive coping strategy. Interestingly, two players reported that applying the strategy of focusing on the game, when facing negative spectators, did not work well no matter how hard they tried. Rational thinking and self-talk dimension was not a major strategy used by the players, however, 27 out of 37 citations were positive, four negative, and four sometimes positive. The leisure activities coping dimension was effectively used to cope with psychological demands of being an elite shuttler, especially for handling the boredom of the routine life as a national player. This strategy was also used when the players were playing overseas for a long time, but, as the variety of activities that they could do during the time was limited, after a couple of days this strategy would no longer be effective.

The coping strategy of determining solutions to problems was commonly used to solve personal life concerns. This strategy was also used effectively to cope with coping dimensions of social relationship problems and psychological

demands of being an elite shuttler. One player noted that usually this strategy worked only if the problems were not too serious. The personal physical fitness strategy was, not surprisingly, used mostly to cope with illness and injury concerns. This strategy did not really help the players who had a serious injury, especially, if it was a recurring injury.

Detachment such as not thinking about stressors or ignoring them was one of the strategies that sometimes failed. The players used it to try to overcome a range of stressors. Seven out of 36 citations, regarding detachment coping effectiveness, indicated that this strategy was not effective, and three more reports suggested that detachment was only effective occasionally. Two players who tried not to think about the coming game when facing stronger opponents were unsuccessful in so doing. Similarly, two out of six players who tried to detach themselves from negative spectator behaviour were still being distracted by the noisy crowd, especially when the crowd yelled at them.

Reactive behaviours were found to be the least effective coping strategy used by the players in this study. Ten citations indicated that the reactive behaviours had a positive effect on the players, and eight citations indicated such behaviours were not effective. The behaviours were effective in such cases as complaining to the coach, if a particular training program was not suitable, and not effective when the players reacted with negative emotions, such as crying or grumbling.

Nine players who used the religious orientation as a strategy to cope with a range of stressors reported that they felt better after employing the strategy. For

example, a player mentioned that after he said a prayer and gave himself to God, he could overcome the tension related to the expectation of being the best. None of the players reported any negative effectiveness of using the religious orientation in order to eliminate or diminish stress.

Ten out of 13 citations were positively effective, and often used for solving social relationship problems. Two players, however, reported that sometimes this strategy did not work. For example, a player mentioned that if he had a problem, he kept it to himself, not telling his partner in order not to upset his partner. Yet, sometimes by using this strategy, he and his partner did not play well, so he had to use other strategies.

Lastly, the preparing for the future strategy was effectively used by the players in order to overcome stress regarding future life concerns. Most of the players reported that at the moment they saved the money they earned from playing badminton, because they were not sure whether they would have a proper job after they retired. One of the players stated he used to be worried about what would happen after he quit badminton, but, since he decided that he would become a coach and started preparing for it, he felt much better, and not so worried about the future any more. Finally; the inability to cope is not a coping strategy and is obviously not effective in dealing with stress. Nevertheless, the players who reported that they were unable to cope with a particular stressor were still trying to find a way to solve it.

Summing up this section, I noted that the effectiveness of each coping strategy was dependant on the type of stressors, and had a different effect on each

person who employed it. This means that, when different people employed the same strategy, it might have resulted in an outcome that was either effective, not effective, or only effective occasionally for a particular stressor. In addition, when the same person used the same strategy for a stressor on different occasions, it might not always have the same effect. The most frequently cited effective coping dimensions that were used for a variety of stress sources were the social support and relationships, and positive thinking and orientation.

Factors Related to Stress and Coping

Several factors of interest were examined to investigate whether there were any systematic differences between subgroups for stress and coping. The three variables considered were: (a) sex (male and female), (b) speciality of play (singles, doubles, and mixed doubles, and (c) level of experience (more experienced and less experienced). As mentioned in the Participants section, eight male and eight female players participated in this study. For each sex, there were three singles, three doubles, and two mixed doubles players. Even though all the participants were categorised as elite players, several of them were more experienced than the others. A more experienced player was defined as a player who had been a top performer in world competition for more than three years. It does not mean that they have to be an older player. Using this definition, it was found that eight players (five males and three females) were categorised as more experienced, and another eight players (three males and five females) were considered to be less experienced. In this section, differences that emerged among these different groups are discussed. Note should be taken that the comparisons

between particular groups only reflected the small number of participants in this study, not badminton players in general.

Gender Comparison

Sources of stress. Generally, both the male and female players reported all the seven sources of stress. All the female players cited all the stressors, except for the illness and injury concerns, that was only brought up by four players. The male players reported the illness and injury concerns stress source more frequently than the females (six compared to four). Even though all male and female players cited competition stressors as their sources of stress, the way they perceived the stressors were not similar. For example, both genders felt under pressure when they played in a team competition, but the female players perceived the team context as more positive than the males. The female players mentioned that they felt more motivated playing in team competition because the public and teammates supported them. On the contrary, most male players perceived the support as extra demands imposed on them to win, and as a result, it made them feel more burdened. It was also found that more male players doubted their future life after they retired than did the females.

Coping strategies. Several strategies that were generally used by both the male and female players were: social support and relationships, positive thinking and orientation, training hard and enjoy, personal mental strategies, rational thinking and self talk, leisure activities, and detachment general dimensions. The female players employed the determining solutions to problems, reactive behaviours, religious orientation, and isolation more than the male players. On the

contrary, the male players used the personal physical fitness strategies and the preparing for the future coping more than the females. Considering that the strategy of personal physical fitness was mostly used for coping with the illness and injury issues, it was not surprising that the male players employed this strategy more often than the females, because more male players cited injured and illness as stressors. Similar to that, the preparing for the future strategy was customarily used by those who doubted their future life after they retired, which was mentioned more by the males than the females, so that more male players used the strategy. The male players also reported inability to cope with stress more frequently than the female players.

Speciality of Play Comparison

Sources of stress. The main difference between singles and doubles, or singles and mixed doubles, was that the singles players do not have partnership problems. Interestingly, among the paired players, only the male mixed doubles players did not reported having problems with their partner, whereas all the female mixed doubles players mentioned they had problems with their partner. Apart from that, no singles players cited any relationship problems with the coach. Otherwise, speciality of play was relatively free from differences in sources of stress, except for illness and injury concerns. Five out of six singles, and three out of four mixed doubles players cited this concern, but only two out of six doubles players cited illness and injury issues as stressors.

Coping strategies. All players used the social support and relationship strategy, and almost all of them also used the positive thinking and orientation,

training hard and enjoy, personal mental strategies, rational thinking and self talk, and leisure activities general dimensions. All singles players employed reactive behaviours when faced with particular stressors, whereas only half of the doubles and mixed doubles players used the same strategy. The singles players also cited the isolation, religious orientation, and personal physical fitness strategies more frequently than the doubles and mixed doubles players.

All doubles players used detachment as one of their coping strategies, whereas only half of the mixed doubles players (two out of four) reported using the same strategy, as well as four out of six singles players. Five doubles players also reported that they were unable to cope with particular stressors. Only three singles players reported this inability. None of the mixed doubles players mentioned inability to cope. Lastly, the determining solutions to problems, and the preparing for the future coping strategies were used in a similar degrees by the three specialities of play groups.

Level of Experience Comparison

Sources of stress. In general, the sources of stress general dimensions of more experienced players were not different from those of less experienced players. Yet, players with more experience reported feeling more burdened to be the best than those with less experience. This was not surprising, as only the more experienced players reported experiencing mental fatigue related to being national players. All players, though, indicated that the routine training and monotonous life as national players were boring, but the more experienced players perceived this stressor as less stressful than less experienced players. Only the more

experienced players reported having problems with the management, and the more experienced players cited more problems in dealing with media compared to those who were less experienced at the highest competitive level.

Coping strategies. There were not many differences in citing the range of coping strategy dimensions between the more experienced and the less experienced players. The differences were basically in the frequency of application of the religious orientation and the isolation coping strategies. Six out of eight less experienced players reported practising religious behaviours, such as praying, more frequently than those reported by the more experienced players. Interestingly, two experienced players mentioned that they used praying not as their strategy to cope with particular stress (as used by the less experienced players) but did it to wish for general health and safety. Apart from that, six out of eight more experienced players isolated themselves in order to cope with stressors, but only three out of eight of the less experienced players reported using the isolation strategy. The more experienced players used the isolation strategy mostly for avoiding unfavourable people, and for limiting exposure to the press. The application of the other coping strategies was similar for both levels of experience.

Summary of the Results

This investigation resulted in the classification of badminton player's stress into seven general dimensions. These included: competition stressors, social relationship problems, precompetition stressors, personal life concerns,

psychological demands of being an elite shuttler, failure issues, and illness and injury concerns. All players reported stress along many of these dimensions.

In order to cope with that range of stressors, the players reported that they had used 14 different general coping strategies. Those were: social support and relationships, positive thinking and orientation; training hard, preparing and playing smart, personal mental strategies, rational thinking and self talk, leisure activities, determining solutions to problems, personal physical fitness strategies, detachment, reactive behaviours, religious orientation, isolation, inability to cope, and preparing for the future. The results demonstrated that a player could use more than one strategy to cope with a particular stressor, and a single strategy might be used to overcome more than one stressor. The effectiveness of each strategy varied depending on the person who employed it, and the type of stressor that the person faced. Additionally, a particular strategy might work for one level of a stressor, or one period of time, but not for another level of the same stressor, or a different time. The characteristics of the players, such as gender, speciality of play, and level of experience, to some extent might have differentiated the type of stressor faced, and the choice of coping strategies used.

CHAPTER 5: DISCUSSION

The present study involved the sources of stress associated with being an Indonesian elite badminton player, the coping strategies used to cope with the stressors, the relationships between the strategies and the stressors, and the effectiveness of each coping strategy. Comparison between gender, specialities of play, and level of experience of the elite athletes were also examined. Seven stress source general dimensions and 14 major coping strategy dimensions were identified in this study through inductive analysis of the interview transcripts. Each of the major findings is discussed in this chapter, and they are compared to previous sport psychological research. Following that, methodological considerations are examined, and the identification of further research and the practical implications for athletes are discussed.

Discussion of the Findings

Sources of Stress of Indonesian Elite Badminton Players

Results of the study revealed that seven major sources of stress were cited by the players. The stressors included competition stressors, social relationships, failure issues, precompetition stressors, psychological demands of being an elite shuttler, personal life concerns, and illness and injury concerns. Comparing these findings with the previous studies of Gould, Jackson, and Finch (1993) and Scanlan et al. (1991), more similarities occur than differences. This is not surprising, because this study basically followed the method of their studies. Yet

note should be taken that the sample, procedures, and time frame used in the three studies were different. In the study of Scanlan et al., the participants were former senior elite, junior, and novice athletes. Gould et al. used both former and current senior elite athletes, whereas participants in the present study were all current elite athletes at the top of their sports. The mean age of the Scanlan et al. sample was 33 years, that of the Gould et al. sample was 25 years, and players in this study also had an average age of 25 years. The time frame in the Scanlan et al. study was throughout the skating careers (from novice through senior level skating) compared to the focus on senior elite level in both Gould et al. and the present investigation.

Similar to the findings in this study, Gould, Jackson, and Finch (1993) found that US elite figure skaters experienced stress from both competition and noncompetition sources. That study also concluded that 71% of the skaters experienced more stress after winning their national title than before doing so. In particular, when the seven stress source dimensions of the present investigation were compared to the six general dimensions in the phase "after winning title" in the Gould et al. study, the vast majority of stress first and second order themes fit within the Gould et al. general dimensions of relationship issues; expectations and pressure to perform; life direction concerns; psychological, physiological, and environmental demands on skaters' resources; and miscellaneous sources. The seven stress source dimensions in this study also basically reflect a similar taxonomy of the general stress categories identified by Scanlan et al. (1991) that included: negative aspects of competition, negative significant-other relationships,

psychological warfare by competitors, personal struggles, and traumatic experiences. Probably, stressful situations are similar in the world of elite sport competition, so that the differences in type of sport and characteristics of the participants were not a significant factor for determining sources of stress.

Despite substantial consistency between the findings of this study and the previous research, some differences within general stress categories did arise. Gould, Jackson, and Finch (1993), as an illustration, identified self-imposed expectations, attain/maintain weight, lack of improvement due to body maturation, and individuality-independence concerns. The stressors of attain/maintain weight and lack of improvement due to body maturation are important for weight-control sports like figure skating, but are not of such significance for a sport like badminton.

Also from the Scanlan et al. (1991) study, some cultural differences within general stress source dimensions emerge, for instance, dealing with homosexuality, and losing one's sense of self-worth/identity. Because homosexual issues are very rarely discussed, and the topic is essentially taboo, it is not surprising that none of the shuttlers in the present study raised this issue. Another possibility of the occurence of cultural differences was in the case of losing one's self-worth/identity. Similar to the stressor of individuality-independence concerns (Gould, Jackson, & Finch, 1993), the feeling of lost identity might occur in the Western athletes, but not so much to the Eastern performers, probably because the Eastern athletes are used to living in a big family, close to relatives, so that they are more accustomed to be identified as part of the group. Further cross-cultural

research on this topic should be conducted to gain understanding about how cultural differences affect one's perceived stress.

Financial issues emerged as one of the stressors in previous studies, but the specific worries were not similar to those financial concerns that were identified as stressors in the present badminton study. Financial stress on the skaters was the worrying thoughts about whether the family could pay for the skaters' expenses, such as for lessons and travelling. The badminton players might not have cited the lack of personal finances, because they did not have to worry about buying personal badminton equipment, nor were they faced with bills for travel and hiring badminton courts. As a member of the national squad, each player received sufficient support, such as badminton equipment, accommodation, and travel, including financial support for their careers. If the badminton players had been asked about their stressors as a novice player, similar financial problems might have been cited as stressors to those in other studies. The stress of financial concern for the elite badminton players at present, then, related to the distribution of their income from badminton. As the players earned money from their achievements in badminton, they were expected to help their family financially, or to manage their own money for their future life. These were obligations that they had no experience of or training to carry out.

Time management was also perceived as a stressor by the skaters, but only two badminton players reported it as a stressor. The problem of managing time between school and playing badminton might have occurred because the participants in the present study reflected on their experiences throughout their

careers, that is, when they tried to undergo studying at university while. At the time this study was conducted, 14 out of 16 badminton players were living at the National Badminton Training Centre, and they did not go to school or work, but only trained. So, it was not surprising that most of them did not raise such problems as time demands.

Another issue that was raised by the badminton players concerned mental fatigue. Skaters in the Gould, Jackson, and Finch (1993) and Scanlan et al. (1991) studies also mentioned the issue of mental fatigue but with different foci. In particular, the majority of the badminton players reported experiencing mental fatigue and boredom with the routine training and the monotonous life they had as national players. It is not surprising, because they had been living in the training centre for years. Most of the players started living in a club dormitory when they were early teenagers. Basically, the daily activities at both the club and the national training centre were similar. They trained all year, morning and evening. They did daily routines (e.g., breakfast, training, dinner and watching TV) together with other teammates and generally interacted with the same persons. Scanlan et al. (1991) and Gould, Jackson, and Finch (1993) found that the skaters reported getting fatigued from overtraining, becoming frustrated from practising their performance routine over and over again, and having low training enjoyment. Thus, the skaters' mental fatigue was primarily due to training, whereas the shuttlers got bored and fatigued not only from their training, but most commonly from the more general monotonous life of Indonesian elite badminton players. Again, the lifestyle of the badminton players, which involved long

training periods, during which they lived at the training centre, could be an important distinction here.

This study revealed several stress themes that were not identified in either of the two previous studies with skaters. These themes included: having important events imminent, feeling on court tension, and being faced with an unpleasant tournament site. It seems that the worlds of elite skating and badminton underlies these differences. International badminton tournaments that are organised by the IBF are played all over the globe throughout the year, either in tropical or cold weather countries, whereas figure skating is almost always played in those countries that have four seasons, and usually during their winter months. Apart from that, the temperature and surrounding environment of the skating venues are relatively similar to another, unlike the environment of the badminton courts or stadiums that might be quite different between one country and another. Moreover, the draughts on the court and the lighting might interfere the players' performance. These are important issues for badminton players, and parallel with James and Collins (1997) study. They reported that environmental demands, such as weather and type of playing surface, were perceived as sources of stress during competition.

Another study that determined the sources of stress for athletes was conducted by Hoedaya (1997) as a part of his doctoral research. In an approach that differed from the three aforementioned studies, Hoedaya interviewed five Australian and seven Indonesian competitive athletes from different team sports that included baseball, basketball, field hockey, softball, and volleyball. The level

of sporting experiences ranged from local or Grade A to State or Provincial level. Hoedaya identified seven pregame stressor categories and nine game stressor categories. Comparing Hoedaya's pregame and game stressor categories with the general dimensions of stress sources arrived at in the present investigation, there were a number of similarities. The pregame stressors of coach expectations, being ignored by a team-mate (compared to playing partner in this investigation), opponent's playing quality, importance of a game, doubting own performance, and family problems were all identified by the Indonesian elite badminton players. The only category that did not emerge from the badminton players was the presence of significant others. The absence of this as a stressor for the elite badminton players may be the result of differences in the level of competition experiences between the badminton players and the sport participants in Hoedaya's study. James and Collins (1997) reported that significant other was the stressor dimension most frequently cited by participants in their study, and among 20 participants in the study, only two athletes had competed internationally. It seems that the elite badminton players were more accustomed to playing in the presence of large audiences, including significant others. Moreover, all of the badminton players started to play when they were 10 years old or younger, and usually their parents accompanied them either in training or in competition, so, probably they became used to being watched by significant others.

Hoedaya's (1997) game stressor categories of: opponent scores in a close game, bad calls from the umpire, a mental error, a performance error, booing of the spectators, and failure to meet self expectations, were also cited by the

badminton players. Again, these perceived stressors seem to reflect the nature of sports competition. On the other hand, game stressors that were not mentioned by the badminton players, such as a key-player gets injured, a team-mate gets dismissed, and a threat (verbal abuse) by the opponent, more typically occur in team sports, especially body-contact team sports like hockey or basketball.

Another study involving subelite Indonesian athletes from seven closed-skilled individual sports, such as archery, shooting, and swimming, was conducted by Wismaningsih (1993). She found that the main precompetitive stressors affecting subelite Indonesian athletes were: superior ability of the opponent, and outcome demands placed upon the athletes. These stressors were also raised by the badminton players in the present study. Some elite badminton players, on the contrary, felt stress when facing an inferior-ability opponent. This might have happened because the players knew that there was nothing to lose for the inferior players when they faced the top athletes, whereas for the superior players there is always the expectation that they will win.

Results of the current study also indicate that male and female badminton players generally perceive similar stress. At the same time, there were some stressors that differentiated the genders. A case in point, was that, whereas most of the players mentioned that team games were a more likely cause of stressful situations than individual games, females reported being more motivated when playing in a team competition, because they felt that the public and teammates supported them. On the contrary, male players perceived the public support as being a demand to win, and as a result, playing in a team game was viewed as a

greater burden or stressor. A possible explanation of the gender differences in this case is that females typically feel the need for more social support than males. This finding is parallel with other studies reporting that women are more likely to seek social support than men (Carver et al., 1989; Ptacek, Smith, & Zanas, 1992). Additionally, a study by Crocker and Graham (1995) indicated that female athletes seek social support for emotional reasons, and, if they get social support, then, they can increases their effort.

It is also worth noting that speciality of play was not associated with sources of stress, except that no male singles players cited relationship problems with the coach as a source of stress. This difference seemed to be related to a combination of the maturity of the male singles players (their average age was 28 years), their marital status (most of them are married), and their level of experience (each of them was either an Olympic medalist or a world champion). Because of their maturity, it is assumed that the players knew what to do and how to behave regarding their role as elite players. Consequently, their coaches respected them. They could also communicate well, and as a result, there were no noteworthy relationship problems between the coach and the players. Another important finding was that only the more experienced players reported experiencing mental fatigue. This appears to be reasonable, because they also reported being under greater pressure from expectations for them to be the best and to always win, compared to the less experienced players.

In general, the shuttlers reported more acute than chronic forms of stress. Pargman (1986) classified the stress experienced before and during competition as

acute in nature. When an athlete experiences this form of stress regularly in relation to competition, then, it could result in chronic stress. Accordingly, some Indonesian badminton players who participated in this study had the potential to experience chronic stress, for example, the ones who reported being in a slump (failure issues stress) or those experiencing mental fatigue (psychological demands of being an elite shuttler). Additionally, any players who were frequently unable to cope with the stressors imposed on them may gradually come to suffer chronic stress. This is an important finding that should be noted by the coaches, administrators, and sport scientists who work with athletes. It is essential to consider the long term effect of repeated losses at this level, especially on players with a record of great success. As it is in the nature of badminton, that there are more losers than winners in a championship event, this is an issue that needs to be monitored carefully.

In summary, by comparing this study with previous research from a range of participants, including individual/team sports, elite/subelite athletes, and Eastern/Western cultural background, it is worthy of note that the Indonesian elite badminton players perceived many similarities as well as some differences in stress sources compared to other sports participants. The nature of elite competition appeared to be the basis of the similarities, while the specific nature of the sports examined and cultural backgrounds seemed to underlie most of the differences observed among elite athletes. Meanwhile, differences in level of experience also indicated different stress sources perceived by elite badminton players and other subelite athletes. Among the elite badminton players

themselves, gender differences, speciality of play, and level of experience each appeared as influencing factors that might differentiate the type of stress sources perceived by a player, although there were many common stressors.

Coping Strategies Used by Indonesian Elite Badminton Players

Examination of the data indicated that the players sampled in this study used a number of diverse coping strategies to deal with the range of stressors that they experienced. Moreover, players did not rely solely on one method of coping, instead, using a variety of strategies. These findings are consistent with general theory on coping (e.g., Carver et al., 1989; Compas, 1987; Folkman & Lazarus, 1985), as well as current sport psychology research on coping strategies used by athletes from a range of sports and levels of experience (e.g., Gould, Eklund, & Jackson, 1993; Gould, Finch, & Jackson, 1993; Hoedaya, 1997). The badminton players who participated in this study demonstrated that coping was a process in which shuttlers constantly assessed various situations and demands, applied a wide variety of coping responses, and often used two or more strategies simultaneously. These findings clearly support the concept of coping proposed by Lazarus and Folkman (1984, 1991), that referred to coping as an individual's constantly changing cognitive and behavioural efforts to manage external and internal demands or conflicts.

Comparing this study with previous research on coping strategies used by elite US wrestlers and figure skaters that were conducted by Gould and his associates (Gould, Eklund, & Jackson, 1993; Gould, Finch, & Jackson, 1993), again, more similarities were found than differences. The most frequently used

coping strategy by the wrestlers was thought control, and, similarly, the skaters cited rational thinking and self-talk, precompetitive mental preparation, and anxiety management strategies as their primary ways of coping. These strategies were also cited as the second most frequently employed by the badminton players, after the social support and relationships coping dimension. This illustrates the importance of these strategies for athletes in general, and supports Gould, Finch, and Jackson's suggestion to include such strategies in any future coping assessment instrument.

Among the coping strategies used, the social support and relationships coping dimension was employed by all participants, and produced the largest number of raw data themes. This indicates that the Indonesian players, compared to American athletes, place a higher priority on having someone to help them cope with stress, and this social support might be in the form of encouragement, providing information or guidance, or simply being there to accompany them. It is possible that the Indonesian badminton players, as already discussed, were accustomed to be accompanied by their family when they began to play. Moreover, the majority of the players came from badminton families, and some of them were coached by they own parents or relatives, so that they would get used to discussing badminton related problems within the family. Hoedaya's (1997) research with subelite athletes from Indonesia and Australia supports this finding. He found that the Indonesian athletes used the emotional social support coping strategy more than it was used by their Australian counterparts when they faced the stress of being ignored by a team-mate, the opponent's quality of play, the

importance of a particular game, doubting own performance, and thinking about family problems. Another study in coping styles that involved 126 South-East Asian and Australian secondary school students (Neill & Proeve, 1997) also supports this issue. They found that the Asian students used the coping style of Reference to Others more than it was used by the Australian students. Although this finding indicates cultural differences between eastern and western athletes, further cross-cultural research is still needed to clarify this issue. Social support is important to western athletes, but, typically, it does not have the preeminence given to it by Asian sports performers or adolescents.

The coping dimension of training hard, preparing, and playing smart was one of the strategies used by most of the badminton players. Interestingly, training hard might have different functions for various players at different times. A player who had just experienced a failure usually trained harder in order to perform better in the next tournament, whereas other players trained hard and seriously so that they did not feel bored by the program. Apart from that, several players mentioned that routine training could be boring, so that training was perceived as one of the stress sources. Thus, the same factor was a stressor for some and a coping strategy for others, or even both stressor and coping strategy for the same person at different times. This provides further evidence to indicate that individual differences did occur in the perception of stressful situations. At the same time, it suggests that the athletes might be taught to cope with a number of situations by perceiving such situations from the positive point of view.

The personal mental strategies coping strategy was reported by most of the players, but the players did not mention that they learned these mental strategies from a systematic mental training program, such as a psychological skills training (PST) program for performance enhancement. The players just developed the skills from a hint from their coach or relevant others, such as senior players, parents, or psychologist. Although most of the players reported that these strategies were effective for coping with competition stressors, two of 12 players reported that their mental strategies did not work. This case might be consistent with research on imagery, in which athletes who used imagery without formal training, often, repeated imaging their errors, thus, rehearsing the incorrect skills, which could also lead to reduced self-confidence (e.g., Callery, 1996; Murphy & Jowdy, 1992).

Determining solutions to problems was one of the strategies used by the players, especially when they faced personal life concerns. It seemed that the players took responsibility for their own personal concerns, so that they tried to make decisions for themselves, whereas for other concerns, such as training or competition stress, they could rely on somebody else, such as their coach, playing partner, team mates, or family. In addition, badminton competition requires a player to always be physically fit. Accordingly, the players were accustomed to taking care of their bodies. Therefore, it was not surprising that the players reported using personal physical fitness strategies as one of their efforts to cope with stress, especially stress related to illness and injury concerns.

Detachment and ignoring were two strategies that seemed effective for coping with stress in elite badminton. They were used mainly when the players met competition stressors, such as facing negative spectators and a feeling of being disliked by the public. Although detachment was not used very often by the players, the strategy usually seemed to be effective. This was consistent with Roger et al. (1993) who considered detachment to be an adaptive coping style. Yet two stressful situations, failure issues and illness and injury concerns, seemingly were not appropriate to be coped with detachment and ignoring. It seemed that the players have to do something else to deal with stressors like these, rather than ignoring them. This emphasises the point that no coping strategies are universally effective; the context and the stressor need to be considered in judging effectiveness. Classifying strategies as "adaptive" or "maladaptive" in general seems to be inappropriate and should always be done in context.

Isolation was used by the players mostly when they had social relationships problems. Although some players used it to cope with other stressors, such as when they were facing a game, it seemed that the isolation strategy was not the players' primary strategy to use. Roger et al. (1993) classified avoidance coping as a maladaptive strategy. This was consistent with Gould, Finch, and Jackson (1993), who stated that isolation could be deemed maladaptive. Inconsistent with the finding in the present study, although the players did not use this strategy often, almost all players who had used it reported that the strategy was effective. The inconsistency between this finding and the previous studies suggests again that a particular strategy cannot simply be judged

as adaptive or maladaptive. It should be viewed in a specific context in which the strategy was applied. As Folkman (1992) suggested in the goodness-of-fit model of coping effectiveness, the adaptiveness of a strategy is based on whether the stressor is controllable or uncontrollable. In the case of isolation as a strategy to cope with stress, it should be examined whether the isolation had the purpose of avoiding something per se, such as interaction with one's partner after a bad loss, or if it was used as a strategy to enable the person to focus on something else, such as avoiding the media or fans to focus on mental preparation for the important, coming match. In the former case, the isolation might be classified as maladaptive, whereas in the latter case, many would considered it to be an adaptive coping strategy.

Another method that was employed by the Indonesian badminton players in order to cope with stress was taking part in leisure activities. This strategy was mainly used by the players when they were bored with the monotonous life at the training centre. So, in some cases, the leisure activities seem to be used by the players to get away from a boring situation. The players' reported that after they did some leisure activities, then, they could perceive their routine activities as not boring anymore, for a certain period of time. The players' efforts to stay away from the stressor in this case was different from the employment of an isolation coping strategy. In using the strategy of participating in leisure activities, the coping strategies typically produced a reappraisal of the original stressor, whereas when isolation is used to avoid a stressor, the particular stressful situation would

still be appraised as stressful when it was reencountered, in fact, it might induce greater stress.

Preparing for the future as a method of coping with stress was used solely to cope with personal life stressors, especially when the players experienced doubt about their future life. It seemed that the players realised that they would have nothing to lean on after they retired from badminton, because most of them did not have formal education or training in career skills. Therefore, they prepared themselves financially, as long as they were able to play at a high level and earn money from the sport.

More than half the players referred to prayers as a coping strategy. They used it not only before a game, but also when they experienced the psychological burden of being an elite player, and when they had personal problems. Gould, Eklund, and Jackson (1993), reported that 10 per cent of the wrestlers who participated in their study used prayers for divine intervention, support, or inspiration. In contrast to their study, the badminton players here used prayers not only to wish for luck in a game, but mainly for resigning themselves to God, and believed that whatever happened was God's will, so that they felt relieved. From my observation of the players' daily activities and their behaviour during competition, I found almost all of the players (as most Indonesians) practised their prayers regularly, being either Moslems or Christians. Interestingly, the religious orientation coping dimension was reported only by nine out of 16 players. I assume that some players did not mention prayers as their way to cope with stress, because as one of the players reported, he focused his prayers on his general

wishes for health, safety, and happiness. Another possibility was that those who did not refer to religion or prayers did pray to cope with stress, but, because it was internalised they did not realise that it was a strategy for coping, so they did not report it.

Even though the dimension of inability to cope is not a coping strategy, however, nine players did it occasionally. It seems that at the time the stressor appeared, the players could not cope with it immediately. They needed time to solve the problem, or they had tried several strategies but these did not work so they just did nothing. In my opinion, the dimension of inability to cope maybe has been acting as a mediating strategy, because when the players decided that they were not able to cope with the stressor then they did not feel stressed anymore even though the problem itself has not been solved.

The shuttlers were also found to use both problem-focused and emotion-focused coping as proposed by Lazarus and Folkman (1984, 1991). From 14 coping strategy general dimensions that were found in the present study, six strategies could be classified as problem-focused coping. These were: training hard, preparing, and playing smart; personal mental strategies; doing leisure activities; determining solutions to problems; personal physical fitness strategies; and preparing for the future. Another four strategies could be grouped into emotion-focused coping, which included: social support and relationships; rational thinking and self-talk; positive thinking and orientation; and religious orientation. The remaining three strategy dimensions, i.e., reactive behaviours, isolation, and detachment, are difficult to classify either as problem-focused or

emotion-focused coping strategies. For instance, reactive behaviours, which referred to negative emotions, aggressive behaviours, and other poorly thought-out behaviours that emerge as a reaction to a stressor, were used by some players to relieve emotional discomfort, so they could be classified as emotional-focused coping in that context. On the other hand, some players used reactive behaviours, such as warning the reporter not to write misleading comments again, as a way to handle a stressor, so in that context they could be classified as problem-focused coping, as the players removed, or attempted to relieve, the problem.

Another classification of coping strategies was recently offered by Roger et al. (1993), based on their Coping Styles Questionnaire (CSQ). Roger et al. proposed that there were four primary coping components: problem-solving (rational), emotions, avoidance, and detachment. Factor analysis of the items in their questionnaire did identify four factors that corresponded to these four categories of coping. According to that classification, the coping general dimensions of the present study could be classified more clearly. The present coping dimensions that could fit the problem-solving coping categories included: training hard, preparing, and playing smart; personal mental strategies; doing leisure activities; determining solutions to problems; personal physical fitness strategies; and preparing for the future. This agrees with the Folkman and Lazarus (1984, 1991) classification. The dimensions that could fit emotional coping would also be similar to the emotional-focused coping classification based on Folkman and Lazarus, as listed in the previous paragraph. The isolation dimension of the present study (including themes of keeping the problem to oneself, limiting

exposure to the press, isolating self, and avoiding unfavourable people) would fit in the avoidance coping category of Roger et al.'s classification, and the detachment dimension (including themes of not thinking about stressors, ignoring, and detaching self from negative encounters) could be categorised as detachment coping as in the CSQ.

In summary, although a majority of strategies used by the Indonesian elite badminton players were similar to those used in previous research with Western athletes, several differences of the functions of the strategies occurred. Majority of the coping strategies dimensions revealed from this study also matched the classifications of coping strategy from previous research.

The Relationships Between Sources of Stress and Coping Strategies

The badminton players in this study adopted different types of coping strategies depending on the type of stressors they encountered. Yet each particular stressor did not determine the type of coping strategies used. For example, for competition stressors, the majority of the players rely on social support, personal mental strategies, and positive thinking. Occasionally, a player used more than one strategy to cope with a particular stressor. The use of multiple strategies maybe was not due to all of them being considered in initial appraisal, rather one strategy was a response to initial appraisal, but a rapid reappraisal indicated it would not do on its own, so another strategy was added.

Similar to Gould, Finch, and Jackson (1993), this study also revealed that, although certain coping strategies (e.g., social support, positive thinking, and religious orientation) were employed across a variety of sources of stress (e.g.,

competition stressors, psychological demands of being elite players, and personal life concerns), each stressor had a unique cluster of coping strategies related to it. For example, when the players experienced social relationship problems, competition stressors, and failure issues, the most widely used coping strategy was social support. Conversely, when the players doubted what their life would be after they retired from badminton, only the preparing for the future coping strategy was used for dealing with the stress. This is understandable due to the specificity of the stressor.

By examining the relationships between sources of stress and coping strategies used by the Indonesian badminton players, it is possible to reveal a specific pattern of usefulness of a specific strategy with respect to a particular stressor. For example, none of the players reported that they isolate themselves due to a failure issue, instead, the majority of them relied on social support, such as from family or friends, when they encountered failure. This kind of information is important for practitioners who work with athletes, because it may assist them in designing stress management training programs.

The Effectiveness of Coping Strategies

Effectiveness of each of the coping strategies used was reported by the players who employed them. In this study, a strategy for coping was labelled effective if it was reported to overcome or diminish stressful feelings caused by a particular stressor. Because of the subjectivity of the method used for reporting the effectiveness of a coping strategy, it is difficult to make comparisons on the degree of coping effectiveness between two or more players. It should be noted

that when two or more players claimed that a particular strategy was effective, the level of its effectiveness was not necessarily similar for those players.

Some badminton players reported one strategy as effective to cope with a particular stressor, whereas other players cited another strategy being effective to counter the same stressor. For example, when the players experienced failure, some of them sought social support, whereas others did rational thinking and self-talk, or trained harder. It also appeared that one strategy might be effective at one time, but was not effective at other times, and occasionally this depended on the level of stress. For instance, a player reported that focusing on the game was an effective way to block distraction from noisy crowds, however, if the crowds were very wild, even when he made an extra effort to focus to the game this was ineffective. In summary, the effectiveness of a particular coping strategy and the level of its effectiveness might be different for each player.

Methodological Considerations

The participants in the present investigation were elite athletes who were still active as players. The main advantage of using active athletes was that they had potential to be "information-rich cases," as proposed by Patton (1990). Because the study was designed to explore the stress and coping of world class athletes, the elite badminton players were the most relevant athletes to be studied among Indonesian elite athletes (acknowledging a few exceptional athletes from other sports) due to their constantly outstanding achievements at the world level of competition. Some disadvantages did arise from the involvement of athletes who were still playing. A practical problem was the limited time that the athletes

were available to participate in the research, because of their preparations for the Olympics. At the same time, the involvement of active athletes was also an advantage. Not only was this valuable because it did not rely on very long-term memory, but it was also useful because athletes were studied at various points in their careers, as a range of stressors were being addressed, rather than after their careers, when long term retrospective introspection would color the memory more. Because these were all Olympic athletes in the thick of training, recalling and reflecting on stressors and coping could not have been more immediate and salient.

Another important issue that should be considered when studying elite athletes is that there is always information that is so confidential that the researcher cannot publish it. In this study, even just to mention "he" or "she" was sometimes not possible. For example, at the time this study was completed, there were only four Indonesian badminton players, three males and one female, who had won Olympic gold medals. So, if I reported 'she' in the context of Olympic gold medalists, the identity of the one female gold medalist would be uncovered easily by most Indonesians or other people familiar with badminton. Great care was thus taken in the use of language in the Indonesian and English transcripts to maintain confidentiality.

An open-ended interview technique was used in this investigation, following similar studies conducted by Gould and his associates (Gould, Eklund, & Jackson, 1993; Gould, Finch, & Jackson, 1993; Gould, Jackson, & Finch, 1993), which were similar to a study reported by Scanlan et al. (1991). The

advantage of using the interview technique in this study was that we could ask the players what stressors they had experienced, and how they coped with them. It was different from questionnaire-based research, such as Madden et al. (1989, 1990), in which the researcher stated the stressors, and then asked the players how they coped with the stressors. In the Madden et al. (1989) study, there was a possibility that the researchers asked the players how they coped with situations that were not perceived as highly stressful by those specific players, or that had never been experienced by the players. In the present study, the players explained the way they coped only with stressors that they had experienced. Also, in questionnaire-based studies of coping, participants are limited to the coping strategies listed in the questionnaire.

Like most of the qualitative research on stress and coping strategies in sports (e.g., Gould, Eklund, & Jackson, 1993; Gould, Finch, & Jackson, 1993; Gould, Jackson, & Finch, 1993; James & Collins, 1997), the present investigation basically followed the methods in the research developed by Scanlan et al. (1991). The previous studies used a semi-structured interview technique, in which the questions asked were predetermined and read verbatim to the participants. Responses were followed-up with probes that had also been clarified prior to the studies. This ensured equivalence, and was specifically relevant for the Scanlan et al. study, because more than one person conducted the interviews. Although the interviews in the Gould et al. studies were conducted by one person, the interviews were done through telephone conversations. In the present study, only the main topics to be covered at the interviews were listed, so that the actual

format of the questions and follow-up probes was generated by the interviewer. As there were only one interviewer, and the interviews were done face-to-face, it was assumed that there would not be a high degree of variability in the language used. Also the interviewer as a researcher was in position to note, during the interview and while reviewing the tape recording immediately afterwards, whether there was any obvious variation in the verbal or non-verbal aspects of the questions and probes that was likely to influence the athletes' responses. Also, by not reading verbatim the definiton of stress to the participants, I let them express what they had experienced as stressful situations, without any limitation in the meaning of stress. Not defining the term coping was an approach adopted to avoid a situation in which the players did not mention what strategies they used because they considered that the strategies fell outside the definition. On the other hand, I realised that this approach might work in reverse. So, for instance, the players might not report their stress experiences, instead describing their anxiety. Nevertheless, as mentioned earlier in the Literature Review chapter, the terms anxiety and stress do overlap, so, describing anxiety would be describing a stressful time. As the interviewer, however, I kept in mind the definition of stress that I used for this study, so that I would be aware if the players talked about something not related to stress. A similar procedure was adopted for coping. Fortunately, this problem was not evident in the interviews, as the responses reflected stressors and coping strategies that were very similar to those found in the published research on these topics. Additionally, some stressors (e.g., being bored with the life at training centre) and coping strategies (e.g., social support,

prayers) that were intuitively meaningful in the Indonesian elite sport context were revealed from the interviews.

It should be noted that the interviewing process in the present study was not free from weaknesses. As mentioned in the Method chapter, due to the time constraints from the players, only the first three participants were followed-up with second interviews to check on issues unclear or uncovered in the first interviews. From the three follow-up interviews, however, no crucial new information on sources of stress and coping strategies was gained. Taking advantage of my familiarity with the players involved and the game of badminton in Indonesia and around the world led to a minimal need for me to elicit further information from the players in order to understand the responses. Another issue was that keeping in mind all aspects of the stressors and coping strategies created some difficulties at the time when I was trying to elicit comments on effectiveness of the coping strategies used for each stressor. It could be that all aspects of effectiveness were not covered during the interviews, at least in part, because of this problem of thinking about stressors and coping strategies, while asking other questions. In this case, even my familiarity with the players could not help me to identify whether a particular coping strategy was effective. Therefore, by not taking a follow-up interview, I could have missed some valuable information on effectiveness. This showed the value of a follow-up interview to check on issues not clear or not covered in the first interview. Overall, the effectiveness of a wide range of coping strategies was examined.

To maximise the limited time that the players had available for interviews, I prepared myself by collecting information about their demographic background regarding their personal identity and previous accomplishments that was needed to fill in the demographic questionnaires. I accessed the information from relevant sources, such as the IBF ranking list, championships records, and relevant persons such as coaches and administrators. At the interviews, I only asked the players to check their demographic form, amend it or add new information as necessary. By doing this, I was able to allocate my limited time to focus my questions on their coping with stressful experiences. Not only did I save time by this approach, but I also felt more familiar with the players' backgrounds.

Unfortunately, the present study did not use other methods, such as observations of the players' behaviours during a match, or interviewing relevant others, such as the coach. Consequently, methodological triangulation (Denzin, 1989) was not applied in this study. Nevertheless, my previous experience in consulting with almost all of the participants, including traveling with them to some big events like the Thomas and Uber Cups (World Team Championships), provided me with a wealth of recent, relevant observational experience, on the basis of which to compare or to check whether what the players said was consistent with their behaviour. Also, my consulting experience could be used as a tool to help me to better understand what they had mentioned. Close rapport with the participants of the study may also create problems for the researcher (Fontana & Frey, 1994), such as the researcher losing distance from the participants, and as a result losing objectivity. Another concern was that, because

I had worked with the Indonesian Badminton Association, the players would not be honest, telling me what they thought the Association would want to hear, assuming it would get back to the Indonesian Badminton Association officials. On the contrary, because the players knew me and I had previously developed rapport with them, it could be that they would be more comfortable and honest. It appeared that the latter was the case, as players trusted me enough to reveal many very personal issues during the interviews, including some that would not put them in a good light, if the Association knew them.

Another technique to increase the credibility of the researcher is by the employment of a peer debriefer. "It is a process of exposing oneself to a disinterested peer in a manner paralleling an analytic session and for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the inquirer's mind" (Lincoln & Guba, 1985, p. 308). In this study, I did not use a peer debriefer, because this is a research degree, and it was important to ensure that the degree was clearly my own work. Nevertheless, as a Master by research student, I have two supervisors who guided me to conduct the research properly, and at the same time played their role as devil's advocates. So, my academic supervisors also acted as peer debriefers.

I conducted all the interviews and transcribed verbatim the original data myself, to make me more familiar with the data (Minichiello et al.,1995). Yet, there were a few times when I could not understand a word that was said by a player on the tape, until I asked someone else with the same ethnicity as the player. Even though the particular word would not change the meaning of the

sentence, if I had a chance to conduct a second or follow-up interview, it would be the perfect time to ask the player what was said, by replaying the interview cassette. The allowance for dialect did resolve this issue, which occurred only very occasionally anyway.

As the interviews were done in Indonesian language, the original interview transcripts had to be translated into English. I decided that those who translated transcripts should not be familiar with the study to minimise bias. Unfortunately, the translation process took more time than expected, due to the lack of familiarity of the translators with the badminton-related expressions. Moreover, the participants came from different ethnic backgrounds in Indonesia, and they used a lot of slang and unusual accents of the Indonesian language. For this reason, it is suggested that for future research in similar conditions, it would be better if the interviewer was also involved in the process of translation of the interview transcripts, because of the familiarity of the interviewer with the data. Provided that there is at least one naive translator, the probability of the interviewer introducing any systematic bias is limited.

As a conclusion for this section, it can be stated the method used in the present study had much in common with the previous qualitative sports research on stress and coping. Some variations occurred, all of which were pre-determined, based on the specific conditions and context of the present study. Although several aspects of the procedure have been raised in this section as potential areas for consideration in the method of future studies, there was nothing in the present method that can be considered to greatly affect the veracity of the data collected.

Implications of the Findings

Results indicated that the players reported experiencing a number of stressors, and a range of strategies were used to cope with the stressors. These findings parallel many other studies (e.g., Anshel, 1996; Gould, Jackson, & Finch, 1993; Madden et al., 1990; Scanlan et al., 1991). Individual differences were also found along with differences between gender, speciality of play, and level of experience groups. Implications of these findings for further research and practical considerations are discussed in this section.

Implications for Future Studies

To improve the quality of future studies, there are several considerations regarding the methodology. Firstly, because this area of study covers a range of issues in stress and coping, it might be effective for each participant to be interviewed in several shorter sessions, rather than in one long, single session. The advantages of conducting the interview in several sessions would be that it would allow the interviewer to be more focused on one topic (e.g., sources of stress) at a time, and the interviewer would have a chance to evaluate the first issue before continuing to another topic. One player who came to the second interview told me that it would be more comfortable for the player to be involved in several short interviews. This would also be more convenient, considering the player's tight schedules. To enhance the trustworthiness of the study, the interview transcripts might be given to the participant to be checked and authorised for the accuracy and authenticity of the data.

The results indicated that, in general, the types of stressors experienced by Indonesian elite badminton players parallel those faced by other elite athletes from different sports and cultures. An implication of this finding for further research is that it can be assumed that the Indonesians, and, perhaps, other Eastern cultural background athletes experience largely similar stressors to those reported by Western background athletes. For this reason, if a study needs an assessment instrument for identifying sources of stress in order to triangulate the method of data collection, therefore, a Western-based questionnaire, such as the Stressful Situations in Basketball Questionnaire (Madden et al., 1990) might be used in their original or a slightly modified form with athletes from Eastern cultures. Even so, reliability of the assessment instrument, for a certain culture, should still be determined before the questionnaire is used, or at least when it is first used, especially if it is translated into another language. Although the present interview technique is valuable for exploring the range of stressors in a non-restrictive manner, it constrains research to small groups, making the inference of general patterns inappropriate. Thus, the findings cannot be generalised for all athletes, or even all badminton players. To examine such patterns, as well as to determine whether differences in stressors arise for various groups, such as elite versus nonelite, seniors versus juniors, or team versus individual sports, a more appropriate paradigm is to test large numbers of participants, using valid and reliable questionnaires. The present results suggest that such research is feasible in an Eastern cultures, using existing instruments, developed in Western cultures with probably minimal modifications.

This investigation revealed several coping strategies used by Indonesian badminton players that parallel those found in previous studies conducted with American, Australian, and British athletes. Some differences were also found between the Indonesian and the Western culture athletes in their use of strategies to cope with particular stressors. This finding supports previous cross-cultural studies in coping (e.g., Hoedaya, 1997; Radford, Mann, Ohta, & Nakane, 1993), which indicated that coping strategies used by individuals from more "individualist" cultures (e.g., Western athletes) were different from those used by athletes from a "community" oriented cultural background (e.g., Eastern athletes). For example, the emotional social support and relationships strategy was most frequently selected by the Indonesian participants both in this study and in that of Hoedaya. Further cross-cultural studies between Eastern and Western cultures as well as among the Eastern cultures are needed to gain more detailed understanding of these cultural differences. Such studies should select matched samples from the east and west and apply the same measuring instruments, whether qualitative, quantitative, or both, to minimise the variability due to methods or aspects of the samples.

In this study, the effectiveness of a particular coping strategy was identified by asking the participants whether that strategy was effective for managing a certain stressor. By asking that question, it was possible to know whether the strategy used by the players was perceived as effective, not effective, or only effective occasionally. Unfortunately, the interview technique used in this investigation was not able to assess the level of effectiveness, and to compare the

level of effectiveness of a similar strategy used by two or more individuals for coping with a particular stressor. Based on this limitation, I suggest that for further research, it is important to develop a scale to measure the level of coping effectiveness. By combining an in-depth, open-ended interview and the scale, thus, the level of coping effectiveness between two or more individuals or between groups can be compared. This might be crucial also for monitoring the progress of stress management programs or other mental preparation interventions. Thus, to monitor effectiveness, it is not enough merely identify which coping strategies are being used. Results revealed that coping strategies are effective in some situations, but ineffective in others. In addition, they can be used more or less effectively in appropriate situations depending on the skill of the individuals who used the strategies.

To understand the effectiveness of coping more thoroughly, further research using similar interviewing techniques certainly has a role to play, but there is a need to emphasise questions about the level of effectiveness of each coping strategy. One should be able to differentiate in what situation a coping strategy is effective, in what situation it is not effective, and how performers feel after they have employed a certain strategy. Asking the reason why a person used a particular strategy in a specific situation is also an important direction for future research. Research on the processes that lead to the selection of coping strategies would help applied sport psychologists to direct coping interventions more precisely.

The results of this investigation revealed that the strategies used by the elite badminton players to cope with stressors could be fitted into four general coping styles proposed by Roger et al. (1993) in the Coping Styles Questionnaire (CSQ). These categories were: rational (problem-focused), emotional, avoidance, and detachment coping. The "rational coping" general dimensions included: training hard, preparing, and playing smart; personal mental strategies; determining solutions to problems; preparing for the future; personal physical fitness strategy, and the leisure activities strategy. The coping dimensions that fit "emotional coping" are: social support and relationships; rational thinking and self-talk; positive thinking and orientation; religious orientation; and the reactive behaviours. Yet the latter was occasionally used as a problem-focused strategy, for example, to make an appeal if a referee made several wrong decisions during a match. In the present study, clear categories of avoidance and detachment coping emerged from the inductive content analysis. For "avoidance coping," the isolation coping dimension is matched, and the "detachment" dimension fits the detachment coping strategy in the CSQ. Note should be taken that the classification into a certain style may be flexible, concerning the aim of the strategy. For instance, the leisure activities coping dimension is classified as rational or problem-focused coping, when it is used to handle the boredom of the monotonous life at the training centre. It solved the problem by introducing a change, different activities to provide variety. On the other hand, going to see a movie when a player has a problem with his or her playing partner is avoiding the issue, therefore, in this case it might be classified as avoidance coping.

Based on this close parallel between a general questionnaire and the dimensions that emerged from an interview study of elite athletes, and the fact that the CSQ provides the broadest categorisation of existing instruments, I suggest that the CSQ has potential for use in sport coping research where quantitative methods are more appropriate. The instructions may need some modification so that the measure can be adapted as a sport-specific measure of coping. Also, items representing various coping strategies used by athletes that are not covered by the current items of the CSQ can be identified from the present study, as well as from those of Gould, Eklund, and Jackson (1993), Gould, Finch, and Jackson (1993), and Scanlan et al. (1991). Validation of the modified scale with an athletic sample would be necessary.

Badminton in Indonesia is the country's biggest sport with numerous world accomplishments. The large number of badminton players in Indonesia is well organised into various levels of skill and from junior to senior according to their age group. Taking advantage of the huge numbers of people playing badminton competitively in Indonesia, further research involving all categories of players may be worthwhile, not only for Indonesian badminton, but also for the understanding of stress and coping in sports in general. Such research might particularly investigate the relationship between experience and coping, as well as that between expertise and coping. Age effects might also be distinguished from those of experience by careful sampling.

Further longitudinal research is also needed that focuses on different settings, such as training, before a match, in competition, after competition, and

after winning or losing a match. This sort of research is particularly important in terms of identifying situational and personal factors that influence what is perceived to be stressful at any time, the choice of coping strategy to cope with the same stressor on different occasions, and the perceived effectiveness of specific coping strategies for dealing with particular stressors on different occasions. Greater understanding of the transactional nature of stress and coping would also be gained from studies that followed the course of a stressor, its appraisal, reappraisal, and various efforts to cope with it, over a period of time.

Additionally, it is important to know whether there are any differences between individual and team sport athletes, either in terms of what situations are perceived to be stressful, or in relation to which coping strategies are employed in such situations. Some elite badminton players in the present investigation mentioned that stress is often rooted in several sources, instead of a single stressor. Accordingly, further research is also needed to discover how different types of stressors influence each other, and how a particular coping strategy can sometimes be effective, but at other times it is not effective.

Implications for Practice

Research of this sort is of little value if it cannot recommend any direct or indirect implications for practice. There are some practical implications from this investigation for those who work to improve athletes' mental preparation skills. In the interviews conducted, the 16 Indonesian badminton players did not indicate that they widely used systematic stress management techniques or other mental preparation skills. Moreover, some players reported that they were unable to cope

with stress that they had experienced, or that they did employ coping strategies, but judged their effectiveness as low. For this reason, I strongly recommend that many players are likely to benefit from experiencing mental skills training programs. Including such systematic training into the players' development program, so that they learn to practise it systematically, would seem to be important to enrich the players' coping resources. As it was revealed that players used different ways to cope with stress, I suggest that the stress management programs be designed individually, based on each player's needs. Such needs should emerge from interviews, observation, questionnaires, and discussions with people close to the athlete.

Roger et al. (1993) classified the rational coping and detachment coping styles as an adaptive coping, whereas emotion coping and avoidance coping were categorised as maladaptive. Based on the results of this study, it is apparent that simply labeling a particular strategy as adaptive or maladaptive coping is inaccurate. As a case in point, employing a detachment strategy to cope with a controllable problem, such as injury or relationships, does not solve a solvable problem. In this case, detachment coping would be maladaptive. On the other hand, using an example from the present study, a player mentioned that before a game he preferred to isolate himself only with his coach, and avoid the crowds to make him more focused on the game. It was apparent that employing avoidance coping for this case was adaptable. Based on the findings of this investigation, I suggest that prior to a mental skills training program, each athlete should be interviewed to discover in what situations he or she feels most under stress. The

athlete then could be taught to determine whether each stressor is controllable or uncontrollable. This is important for deciding what type of coping functions, either problem-focused or emotion-focused, should best be used by the athlete in that situation. As proposed by previous research, if the stressors are controllable, then the problem-focused coping strategies would be effective, whereas if the stressors are uncontrollable, then, the appropriate strategies should be emotion-focused, including detachment and avoidance coping.

Similar to identifying sources of stress before designing a mental skills program, recognising what strategies are effective or work best for each athlete, each stressor, and each situation, and what strategies are ineffective is also important. By acknowledging the stressors and the effective and ineffective coping strategies, a potential situation that might create stress may be avoided, or its effects might be limited. Whenever it is impossible to avoid it, the player could be prepared with an effective coping strategy or combination of strategies that is suitable for that player and the specific situation. As an illustration, some players reported that they preferred to stay in their room before a game. On the contrary, some said that staying in a room on their own would make them experience a higher level of stress, because they would keep thinking about the coming match. In this case, the specific technique of focusing was effective for one type of player, but not for the other, where attention distraction seemed to be more suitable. These findings are also important in terms of their implication for people who work with athletes, particularly sport psychologists. Sport psychologists should always consider individual differences to help them decide on the

appropriate mental training program for each player. Apart from that, in a mental skills training program, the players should be taught not only what strategies they could use, and how to employ such strategies, but they should also learn to appreciate when is the right time to use such strategies. For example, the strategy of ignoring might be effective to cope with the stress caused by negative comments from spectators, but it would not be appropriate for dealing with the stress caused by injury or sickness that required medical treatment.

The results also revealed that the same strategy was not always employed by the same player or by different players for coping with the same stressor, and even if the same strategy was used, it was not always effective. Some strategies, though, are more consistent. For example, almost all the participants reported they went out when bored at the NTC. This condition might be a sign for the sport management committees to include recreational facilities in such dormitory or training centres to provide some relief from the monotony. Nevertheless, the coaches and administrators need to recognise that there is no substitute for an occasional change of environment and activity. The provision or programming of more free time, when athletes can go away from the training centre and do what they want seems to be a straightforward and important change that can be instituted immediately. In addition, the players need to be advised to vary their activities with something that might be relevant for their future life. Relating this issue with the players' notion about future life stressors, a career and educational program seems to be one relevant option that may be offered to the athletes to pursue. Deidre Anderson, the National Manager of Athlete Career and Education

(ACE) program at the Australian Institute of Sport, explained that the ACE program has provided more variety and interest in the AIS athletes lives, helping to give them broader social experience, as well as providing future direction for their careers (D. Anderson, personal communication, 17 September, 1997).

Social support coping was cited as the most widely used strategy by elite badminton players. Consequently, players can be more encouraged not to feel inferior or weak for seeking support or help from relevant others, such as coach, parents, friends, sport psychologists, seniors, and ex-players. At the same time, each player could be a significant other for several others, so it is necessary to encourage players to offer social support to those who appear most stressed.

Another important issue that could be implied from the results is that some players mentioned that they "coped by experience." This statement indicated that coping is often learned, so that it needs time to be mastered. Training younger players to use certain strategies that might otherwise take years to develop through trial and error could help them to avoid a lot of unnecessary stress. Consequently, it should be built in with the entire training program. Finally, in the clinical context, Holahan, Moos, and Schaefer (1996) stated that since stressful situations inevitably occur in life, clinicians can identify coping skills and associated coping resources that can help clients deal with these situations more effectively. Such information is equally relevant for sport psychologists, helping them to understand how their athletes manage specific stressful circumstances, so they can plan intervention programs that target athletes' precise coping deficits. Encouraging practitioners to keep an open mind to patterns of stress and coping in

the athletes that they work with can also serve the purpose of providing valuable new research directions. Issues raised by practitioners' observations and recordings could be the stimulus for studies on specific aspects of stress and coping.

Concluding Remarks

Sixteen Indonesian elite badminton players, who participated in this research, cited seven major stress source dimensions they had experienced, either related or unrelated to badminton competition. The main conclusion from the stressor general dimensions that were identified was parallel with the previous interview-based studies that have been done with different sports and levels of experience (e.g., Gould, Jackson, & Finch, 1993; Scanlan et al., 1991), and supports Lazarus and his colleagues' idea that individuals perceive a range of situations to be stressful (Lazarus & Folkman, 1984; Folkman & Lazarus, 1985; Monat & Lazarus, 1991). These findings provided further evidence that there is a range of stressor dimensions into which a wide variety of specific stressful situations fit, and that each individual perceives different stressors. Consequently, practitioners need to be aware of the range, but can also be sensitive to common ones. These findings also indicated that not every athlete is stressed by the same stressor in the same way, so that it is very important for those who work with athletes who experience a lot of stress, to understand individuals.

Results also revealed that the players used a range of strategies to cope with particular stressors. Fourteen major coping strategy general dimensions emerged from the data. These generally fit with Roger et al.'s (1993) coping

categories of rational, emotional, detached, and avoidance coping. The usefulness of various coping strategies provides further evidence that individuals often employed more than one strategy to cope with a particular stressor. Results also revealed that a specific strategy might be effective for one stressor, but not for others, and one strategy might be effective to cope with a particular stressor for one player, but did not work for another player. All of these findings provide more evidence to support the claim that individual differences occur in coping with stress. Additionally, gender, speciality of play, and level of experience, to some degree, also differentiated the usefulness and the effectiveness of coping strategy use. When the results were compared to studies with samples from a Western cultural background, some differences in prioritising the usefulness of coping strategies also arose. The findings lead us to recognise the importance of considerring specific individual needs in the design of mental preparation programs, especially in terms of providing the individual with effective coping strategies.

The research reported in this thesis demonstrated that an open-ended interview technique can be used effectively with elite Indonesian athletes, at least when the researcher speaks fluent Indonesian. In identifying a high degree of similarity between the stress and coping of Indonesian elite athletes and those from a Western background, along with some noteworthy differences, the information in this thesis has provided an impetus to further research on the important issues of stress and coping in athletes from Eastern countries. It has also

provided valuable information for practitioners, whose aim is to help players cope effectively with the stress of being involved in elite sport.

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LIST OF APPENDICES

Appendix A

Pedoman Wawancara

Pertanyaan yang akan diajukan dalam wawancara terhadap para pemain elit bulutangkis Indonesia adalah mengenai:

1. Sumber stress di dalam bulutangkis, seperti:
    - dalam masa latihan
    - dalam masa pertandingan
    - seusai pertandingan
    - hubungan dengan pelatih
    - cedera
2. Sumber stress di luar bulutangkis, seperti:
    - masalah sekolah
    - masalah pribadi
    - hubungan sosial
3. Strategi yang digunakan pemain dalam mengatasi stress tersebut, dan bagaimana pendapat pemain mengenai efektifitas dari strategi tersebut.

Catatan: Berikan pertanyaan elaborasi untuk mendapatkan gambaran yang lebih jelas atas pernyataan pemain. Contoh pertanyaan:

"Tolong jelaskan lebih lanjut apa yang kamu maksud dengan ____?"

"Apakah ada cara lain yang kamu gunakan untuk mengatasi stress tersebut?"

"Adakah hal lain yang ingin kamu sampaikan sehubungan dengan stress dalam bulutangkis atau dalam cara kamu menangani stress tersebut?"

Interview Guide

Questions that will be asked in interview with Indonesian elite badminton players are:

1. Sources of stress inside badminton, such as:
    - during training
    - during competition
    - after competition
    - injury
2. Sources of stress outside badminton, such as:
    - school problems
    - personal problems
    - social relationships
3. Strategies used by the players to cope with the stressors, and what the players think about the effectiveness of the strategies.

Notes: Whenever there is an unclear statement, address elaboration probes, such as:

"Please tell me more details about ____?"

"Are there any other coping strategies that you used?"

"Is there anything else that you want to tell me regarding stress in badminton and how did you handle it?"

Appendix B

Formulir Data Pribadi Pemain

Instruksi:

Isilah pertanyaan berikut ini dengan membubuhkan tanda V di dalam tanda kurung sesuai dengan keadaan diri Anda. Silahkan bertanya jika ada pertanyaan yang kurang jelas.

Nama lengkap: _____ Kode: _____

Anda adalah: ( ) Perempuan ( ) Laki-laki

Umur Anda (dalam tahun): ( ) 16 -18 ( ) 19 - 21 ( ) 22 - 24
( ) 25 - 27 ( ) 28 - 30

Latar belakang etnis Anda: ( ) Ambon ( ) Keturunan Cina
( ) Jawa ( ) Menado
( ) Sumatera ( ) Sunda
( ) Lainnya (sebutkan): _____

Agama Anda adalah: ( ) Budha ( ) Hindu
( ) Islam ( ) Kristen Katolik/Protestan
( ) Lainnya (sebutkan): _____

Nomor spesialisasi Anda: ( ) Tunggal ( ) Ganda ( ) Ganda Campuran

Apakah gelar terbaik dalam turnamen internasional yang Anda capai dalam 4 tahun terakhir? Tulislah nama turnamen tersebut, hasil, dan tahunnya (misalnya, Malaysia Open, finalis, 1995; atau All England, juara, 1992) dalam kolom berikut:

Nama Turnamen	Hasil	Tahun

Demographic Form

Instructions:

Please answer the questions below by placing a V in the appropriate brackets. Do not hesitate to ask if it is unclear.

Name : _____ Code: _____

You are: ( ) Female ( ) Male

Your age (in years): ( ) 16 -18 ( ) 19 - 21 ( ) 22 - 24
( ) 25 - 27 ( ) 28 - 30

Your ethnic background: ( ) Ambon ( ) Chinese
( ) Jawa ( ) Menado
( ) Sumatera ( ) Sunda
( ) Other (please specify): _____

Your religion: ( ) Buddist ( ) Hinduism
( ) Islam ( ) Catholic/Protestant
( ) Other (please specify): _____

Your specialisation: ( ) Singles ( ) Doubles ( ) Mixed-Doubles

Please indicate the four best results that you have achieved in the last four years. Write down the name of the tournaments, results, and the years (e.g., Malaysia Open, finalist, 1995; or All England, champion, 1992) in the table below:

Tournaments	Results	Years

Appendix C

Letter of Approval from PBSI

CONT BY:PBPBSI 96-05-06 11:12PM 0062215124314 +6139240111O # 2

PBSI
FOUNDED MAY 6th 1951
AFFILIATED TO IBF JULY 1953

PERSATUAN BULUTANGKIS SELURUH INDONESIA

(BADMINTON ASSOCIATION OF INDONESIA)

PENGURUS BESAR
Sekretariat : Gedung Pusat Bulutangkis Indonesia
Jl. Damai Raya Kel./Kec. Cipayung, Jakarta Timur - 13840, Indonesia.
Telp. 62-21-8445078, 8446060, Fax. 62-21-8445078, Cable Address : BADMINTON

TO WHOM IT MAY CONCERN

The undersigned,

N a m e : Sumaryono
Position : Vice President
Badminton Association of Indonesia

herewith confirm that the Association will allow Ms. Yuanita Nasution to get access to conduct interviews with the elite Indonesian badminton players in connection with her research as part of the requirements for her to pursue her Master degree.

We would also like to express our willingness to support Ms. Nasution in her research, which we believe will be of benefit to the development of badminton players in Indonesia as well.

Jakarta, 3rd May, 1996.

SUMARYONO

/yt.

Appendix D

Formulir Pernyataan
untuk berpartisipasi dalam penelitian mengenai
"Strategi Coping yang digunakan oleh pemain elit bulutangkis Indonesia"

Penjelasan mengenai penelitian:

Penelitian ini adalah mengenai cara mengatasi situasi stress dalam olahraga. Dalam penelitian ini Anda akan diwawancara mengenai stress yang dialami sebagai pemain elit bulutangkis Indonesia, dan cara yang Anda lakukan untuk mengatasi stress tersebut. Wawancara tersebut akan direkam dengan tape recorder. Tidak ada jawaban benar atau salah dalam menjawab pertanyaan yang diajukan, namun Anda dimohon untuk menjawab apa adanya, sejujurnya. Kerahasiaan penelitian akan dijamin, untuk itu nama Anda tidak akan dicantumkan dalam laporan penelitian. Anda sewaktu-waktu dapat menarik diri dari penelitian ini. Anda juga diberi kebebasan untuk bertanya, kapanpun jika Anda memiliki pertanyaan. Setelah penelitian selesai, Anda akan menerima laporan singkat hasil penelitian ini. Terima kasih banyak atas partisipasi Anda dalam penelitian ini.

Pernyataan

Saya, _____ menyatakan bahwa:

Saya telah diberi penjelasan mengenai penelitian ini.
Saya telah diberi kesempatan untuk bertanya.
Saya sewaktu-waktu dapat mengajukan pertanyaan lebih lanjut.
Saya telah diberitahu bahwa hasil penelitian ini akan dijamin kerahasiaannya.
Saya sewaktu-waktu dapat menarik diri dari penelitian ini

dan saya bersedia untuk berpartisipasi dalam penelitian ini dengan segala kondisinya.

Tanda tangan: _____ Tanggal: _____ 1996

Segala pertanyaan yang berhubungan dengan partisipasi Anda dalam penelitian ini dapat diajukan kepada Yuanita Nasution, nomor telepon: (021)8300583 atau (0251)328867; juga pertanyaan atau keberatan dapat diajukan langsung kepada: Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MCMC, Melbourne 8001, Australia, nomor telepon : (0613)9688 4710.

pmytn/yn96

Consent Form

Nature of the Study

This is a research project about coping with stressful situations in sport, particularly in elite badminton. In this study, you will be interviewed about stressful situations that you have experienced as being an Indonesian elite badminton player, and how you dealt with them. The interview will be tape recorded. You should answer the questions honestly; there are no right or wrong answers. Results from the study will be kept totally confidential, and only group results, not individual names will appear on the report. You are free to withdraw from the study at any time. You are also encouraged to ask questions at any time if you have any queries.

Informed Consent

I, _____, acknowledge that:

The nature of the study has been explained to me.

I have been given the chance to ask questions.

I may ask further questions at any time.

I have been informed that my results will be confidential.

I may withdraw at any time

and that I am willing to participate in the study under these conditions.

Signed: _____ Date: _____ 1996.

Any queries about your participation in this project may be directed to the researcher (Yuanita Nasution, ph: 021-8300583 or 0251-328867); also, any queries or complaints may be directed to the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MCMC, Melbourne, 8001 (telephone no: 0613-9688 4710).

prnytn/yn96